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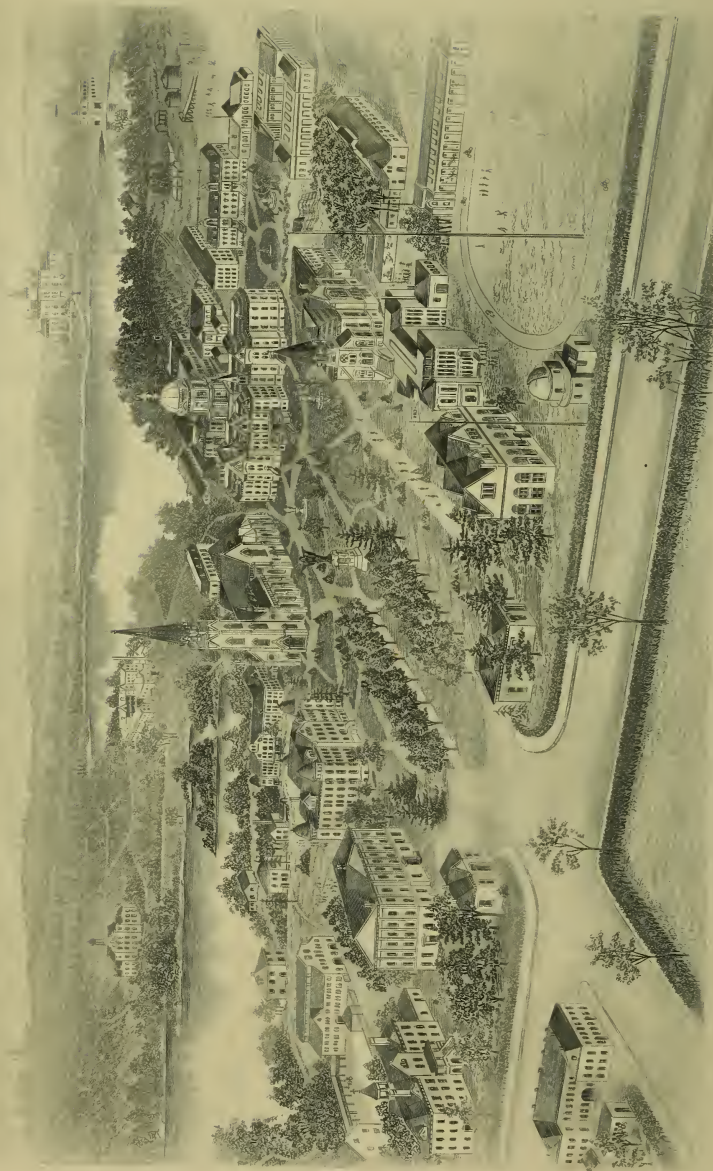








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UNIVERSITY OF NOTRE DAME.  
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CATALOGUE

OF THE

UNIVERSITY

OF NOTRE DAME



1898-1899.

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# DIRECTORY OF THE UNIVERSITY.



The FACULTY—Address :

NOTRE DAME UNIVERSITY,

NOTRE DAME, INDIANA.

The STUDENTS—Address :

As for the Faculty, except that the name of  
the HALL in which the Student lives should  
be added.

There are a Postoffice, a Telegraph Office, and an Express  
Office at the University.



The University is two miles from the city of South Bend, Indiana, and about eighty miles east of Chicago. The Lake Shore & Michigan Southern, the Grand Trunk, the Vandalia, the Indiana, Illinois & Iowa, the St. Joseph, South Bend & Southern, and the Michigan Central railways run directly into South Bend.

## Calendar of the University for 1899-1900.



- SEPTEMBER 5. Examinations of Conditioned Students.  
6-7. Entrance Examinations.  
8. Schools Begin.  
17. Reading of University Regulations in all the Halls.
- OCTOBER . 13. Founder's Day. Holiday.  
27-28. Bi-Monthly Examinations.  
29. Annual Retreat begins in the Evening.
- NOVEMBER 1. Feast of All Saints. Holiday.  
30. Thanksgiving Day. Holiday.  
30. President's Day. Holiday.
- DECEMBER . 8. Feast of the Immaculate Conception. Holiday.  
19-20. Winter Examinations.  
21. Christmas Vacation Begins.
- JANUARY . 5. Schools Begin.
- FEBRUARY 22. Washington's Birthday. Holiday.  
23-24. Bi-Monthly Examinations.
- MARCH . . 17. St. Patrick's Day. Holiday.  
19. St. Joseph's Day. Holiday.
- APRIL . . 15. Easter Day. *No Vacation at Easter.*  
16. Easter Monday. Holiday.  
27-28. Bi-Monthly Examinations.
- MAY . . . . 1. Latest Date for handing in Prize and Graduation Essays in all Collegiate Courses.  
23. Contest in Elocution.  
30. Decoration Day. Holiday.  
31. Contest in Oratory.
- JUNE . . . . 9. Examination of Graduates Begins.  
10. Baccalaureate Sermon.  
11-13. General Examinations.  
13. Commencement. Preliminary Exercises,  
7:30 P. M.  
14. Graduation Exercises, 8:00 A. M.

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REV. MARTIN J. REGAN, C. S. C.,  
Christian Doctrine.

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Physics and Electrical Engineering.

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Elocution.

FRANCIS J. POWERS, B. S.,  
Biology.



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English.

JAMES D. BARRY, A. B.,  
Latin and English.

PAUL JEROME RAGAN, A. B.,  
English.

FRANCIS EARLE HERING, LITT. B.,  
English.

BRO. BASIL, C. S. C.,  
Director of Musical Department.

BRO. LEOPOLD, C. S. C.,  
Instrumental Music.

BRO. GERARD, C. S. C.,  
Instrumental Music.

DAMIS PAUL,  
Piano and Violin.

JAMES J. McLAUGHLIN, JR.,  
Vocal Music, Director of Band and Orchestra.

FRANCIS F. DUKETTE,  
Music.

JOBSON EMILIE PARADIS, A. M.,  
Painting and Artistic Drawing. (Pupil of Gerome.)

FRANCIS XAVIER ACKERMANN,  
Drawing.

JAMES P. FOGARTY,  
Telegraphy.

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Spanish.

S. FRANCIS BAUWENS,  
Assistant in Shop-Work.



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PAUL BEYER,  
Gymnastics.

FRANCIS EARLE HERING, Litt. B.  
Instructor in Athletics.

# NOTRE DAME UNIVERSITY.



The University of Notre Dame was founded in the year 1842, by the Very Reverend Edward Sorin, the late Superior General of the Congregation of the Holy Cross. In an act approved January 15, 1844, the Legislature of Indiana gave the University power to grant degrees. The beginning of this act is:

*"Be it enacted by the General Assembly of the State of Indiana, That Edward Frederick Sorin, Francis Lewis Cointet, Theophilus Jerome Marivault, Francis Gouesse, and their associates and successors in office, be, and are hereby constituted and declared to be, a body corporate and politic, by the name and style of the 'University of Notre Dame du Lac,' and by that name they shall have perpetual succession, with full power and authority to confer and grant, or cause to be conferred and granted, such degrees and diplomas in the liberal arts and sciences, and in law and medicine, as are usually conferred and granted in other Universities in the United States, provided, however, that no degree shall be conferred or diplomas granted, except to students who have acquired the same proficiency in the liberal arts and sciences, and in law and medicine, as is customary in other Universities in the United States."* \*

## UNIVERSITY BUILDINGS.



### THE MAIN BUILDING.

The dimensions of this building are 320 by 155 feet; it is five stories in height, and it is surmounted by a dome 207 feet in height. The executive offices, two study-halls, some dormitories and class-rooms and the refectories are in this building. The Library and the Bishops' Memorial Hall are also there temporarily. This building, like all others in the University, is lighted by electricity and gas, and heated by steam. The corridors of the first floor are decorated with mural paintings by Gregori. All the University buildings are made of yellow brick.

### THE CHURCH.

This building is 275 by 120 feet in ground dimensions and 125 feet in height from the ground to the roof-ridge. The interior is decorated by Gregori, and the architecture is Gothic. There is a large crypt and many chapels. In the tower are a chime of 32 bells and the great six-ton chief bell.

### THE LIBRARY.

The Library contains 55,000 volumes. Students have access to it from 8:00 A. M. to 9:00 P. M.

### WASHINGTON HALL.

This hall is 170 feet in length, 100 feet in width, and about 100 feet in height. It contains the rooms of the Musical department, the reading rooms for Brownson and Carroll Halls, and the University Theatre. The Theatre is equipped with stage settings, and it will contain 1,200 persons.



## SCIENCE HALL

is situated a few steps south of Washington Hall. The dimensions are 104 by 131 feet, and it is three stories in height. A large central space, the full height of the building, is occupied by the Museum containing mineral, fossil, and biological specimens.

## THE CHEMICAL DEPARTMENT

occupies the entire north side of the first and second floors of Science Hall.

On the second floor, and adjoining the General Museum, is a large and well lighted room reserved for a library and chemical museum. Here are a library of chemical journals and books, and a steadily increasing collection of minerals, chemicals, and chemical-technical products of all kinds, designed to serve as illustrations of substances and processes discussed in the various lecture courses. Adjoining this room are, successively, an apparatus-room, filled with the most modern apparatus for lecture and experimental work; a chemical store-room, where laboratory supplies may be procured by the students; a lecture-room, and a laboratory for General Experimental Chemistry and Qualitative Analysis. The laboratory is furnished with four hoods, of good draught; the desks are provided with water, gas, and the necessary reagents, and can furnish accommodation for fifty students. The lecture-room is provided, among other things, with apparatus for stereopticon illustration, with electric batteries, and with a complete set of charts illustrative of the processes employed in modern chemical industries.

On the first floor of the building, to the left, is the laboratory of Quantitative and Organic Chemistry, provided with ample hood accommodation, and with each desk furnished with water, gas, and suction. The balance-room, adjoining, contains assay and analytical balances, sensitive

to one ten-thousandth gram. The assay and furnace-room, on the same floor, is equipped with a set of gas furnaces of the most modern type, for the operations of roasting, fusing, scorifying and cupelling employed in the dry assay of ores.

The Department of

#### PHYSICS AND ELECTRICAL ENGINEERING

is located in the south wing. There is a large lecture room, with a seating capacity for sixty-five students, adjoining the rooms in which the apparatus is stored in dust-proof cases. Several smaller rooms in the basement contain heavy piers of masonry, for work with sensitive galvanometers.

The following is a partial list of the more important pieces of apparatus in the Physical Laboratories:

#### IN MECHANICS, ETC.:

Large physical balance,	Compound pendulum,
Standard kilogram,	Break circuit chronograph,
Standard meter,	Powerful hydraulic press with
Geneva cathetometer,	attachments,
Dividing engine,	Rotary air pump and receivers.
Atwood's machine,	

#### IN ACOUSTICS:

A Mercadier radiophone,	Three sets of organ pipes,
Set of K��nig resonators,	Four sets of fine tuning forks,
Set of electrically-operated tuning forks by K��nig,	Edison phonograph,
A Scott-K��nig phonautograph,	Apparatus for manometric observation of sound phenomena,
K��nig's movable turning forks to draw compound curves on smoked glass,	Sets of vibrating rods, tubes and bells,
	Large double siren.

#### IN LIGHT:

Complete set of diffraction and interference apparatus by Soleil, Paris,	Two heliostats,
Sets of polarizing apparatus,	Four spectroscopes,
Sets of lenses and spherical mirrors,	A polarizing saccharimeter,
	Three projecting lanterns for gas or electric light, and 2,000 slides.

- |   |  |
|---|--|
| Two Rowland gratings, 14,000 lines to the inch,   | Several cameras with lenses and attachments,     |
| Sets of photographs of solar spectrum by Rowland, | A well equipped dark-room for photographic work. |

## IN HEAT:

- |  |                         |
|--|-------------------------|
| Melloni's apparatus for measuring radiation, absorption and reflection of heat, complete with prepared substances, | Standard thermometers,  |
|  | Air thermometer,        |
|  | Steam engine indicator, |
|  | Calorimeters.           |

## IN ELECTRICITY AND MAGNETISM:

- |  |  |
|--|--|
| An absolute electrometer,                                      | Six bridges of different types,  |
| Holtz machine and apparatus for illustrating static phenomena, | Historical set of motors showing evolution of the modern machine from the early forms of the reciprocating type, |
| Ten galvanometers of various types,                            | Standard resistance coils,   |
| Ammeters and voltmeters,                                       | Set of storage cells,  |
| One 2,000 lb. electro magnet,                                  | Complete X-ray outfit.   |
| Four induction coils,  |  |

In addition to the electrical apparatus in the Department of Physics, the equipment for the practical work in Electrical Engineering consists of engines, dynamos and instruments of commercial size, as follows:

- |   |  |
|---|--|
| A high frequency 1000 V, 33 K. W., composite wound, Wood alternator of the latest type, with exciter and a full set of switchboard instruments, | A power or foot lathe with wood turning tools, drills and hand tools for metals, |
| Several transformers of different capacity,   | A set of wood working tools,   |
| An Edison bipolar 15 K. W. 125 V, generator,  | A set of tools for metal working,  |
| A Thompson-Houston arc light machine with regulator and fifteen lamps,  | Telegraph and telephone apparatus,   |
| An Edison bipolar 3 K. W. 125 V, with special winding,  | Standard portable bridge,  |
| A Van Depoele compound wound dynamo,  | Common portable bridge,  |
|   | Kohlrausch bridge for measuring battery resistance, etc.,                        |
|   | Testing battery,   |
|   | D'Arsonval and common galvanometers,   |
|   | Resistance boxes, standard megohms, etc.,  |

- |   |  |
|---|--|
| <p>A series wound dynamo with wrought iron field,</p> <p>A number of small motors,</p> <p>A forty horse power high speed automatic engine,</p> <p>A plug switchboard controlling all circuits,</p> <p>A calibrating lamp rack,</p> <p>A small engine belted to shafting to drive a plating dynamo and a buffer for cleaning and polishing work to be plated; solutions, tank, etc.,—in all a complete outfit for electrolytic work,</p> | <p>A number of ammeters and voltmeters, mostly of the Weston type for direct current measurements,</p> <p>A set of inclined coil alternate current portable instruments; voltmeter, ammeter and wattmeter,</p> <p>A case of marked samples of wire insulators, lamps, and other construction materials,</p> <p>Library of practical technical books of reference and files of leading periodicals.</p> |
|---|--|

#### EQUIPMENT IN THE DEPARTMENTS OF BIOLOGY, GEOLOGY, AND MINERALOGY.

The Department of Biology, on the north side of the second floor of Science Hall, consists of three large classrooms and laboratories properly ventilated and lighted. There are also private laboratories set apart for post-graduate students. All the class-rooms are furnished with charts and models necessary in teaching the different courses. The arrangement of the windows is such that the rooms can be easily darkened for the use of a stereopticon and lantern slides on the subjects of Botany, Zoology, and Physiology.

The Laboratories are well equipped with compound and dissecting microscopes, and in each room there is a library of books pertaining to Biological subjects. The Botanical laboratory contains twenty-four compound microscopes and all the requisite accessories for work in vegetable histology and cryptogamic botany. The general laboratory of microscopy, histology and embryology is also supplied with compound microscopes and their necessary accessory apparatus and other equipments indispensable in the three courses mentioned above.

The Bacteriological Laboratory is completely equipped with compound microscopes, incubators, sterilizers, and all the improved apparatus employed in thorough and careful work in Bacteriology. Apart from the others is a laboratory of Photo-Micrography which contains a perfect photo-micrographic instrument with a complete set of accessory apparatus for experimentation, photographing microscopic objects, making lantern-slides, etc. A large and fully equipped dark-room adjoins this laboratory.

The south side of the second floor consists of class-rooms, and laboratories for the courses in Geology and Mineralogy. The laboratories adjoining the class-rooms are well equipped for work in blow-pipe analysis and assaying.

#### THE MUSEUM,

connected with the departments described above, is well arranged for convenience of study. The Zoological collection on the second floor at present fills sixteen large cases and represents typical forms of all the orders and genera of vertebrate and invertebrate animals. A large collection of representative vertebrate skeletons has recently been added to this part of the Museum.

The Botanical collection, also on this floor, consists of two complete Herbaria, one of the United States, the other of Canada. There is also a second collection of the woods and fruits of the United States, almost complete.

The collections in Geology and Mineralogy occupy the first floor. These collections are arranged in a series of cases on each side of the building. In one series is a carefully classified collection of minerals and ores. The opposite series of cases contains a large Geological collection; some of the specimens here are of the rarest fossil remains of animal and plant life.



## ENGINEERING HALL.

The building set apart for the students of Engineering is situated directly south of Science Hall. It is a large three-story brick building, well lighted and heated and was carefully designed for the special purpose it serves. Of the three stories, the upper two are divided into lecture, recitation and drawing rooms. These are used exclusively by the Engineering students and are admirably arranged to meet their needs.

The wood shop, machine shop and blacksmith shop are on the first floor. The wood shop is supplied with modern work-benches fully equipped with the smaller tools necessary for carpentry, twelve lathes, for turning, a jig saw, a revolving planer, a circular saw, and a mortising machine,—the whole forming an adequate equipment for a thorough mastery of scroll work and pattern making. The machine shop contains two steam engines, one horizontal, the other vertical, and from these power is distributed to the various machines by a line of shafting running the entire length of the building. The latest improved lathes have been provided, nine in number, varying from a five inch swing in the smallest to a large engine lathe of ten inch swing, with sixteen foot bed. Two drill presses, a large planer, a shaping machine, and a Brown and Sharp milling machine complete the equipment, thus making the machine shop a model of its kind. The blacksmith shop has the usual complement for teaching forging, annealing, welding, and tool-making.

The southern portion of the second story of this Hall is used for the

## CIVIL ENGINEERING DEPARTMENT.

The equipment of this department is sufficient for all the practice and exercises in the field necessary to illustrate and teach the practical methods of engineering. The instru-

mental outfit consists of one surveyor's transit, one engineer's transit, with level and vertical circle attached to telescope, one engineer's wye level, plane table with all the attachments, clinometers, chains, tapes, etc.

### SORIN HALL.

This building is 144 feet in length, with two wings 112 feet in depth. It has a basement and three high stories. The building contains 101 private rooms for advanced students. These rooms are furnished and students of the Senior or Junior classes of any of the Collegiate Courses are not required to pay rent. On the first floor there is a chapel, a law lecture-room and a law library. The building is lighted with electricity and heated with steam. In the basement are a recreation room and bath rooms.

### THE OBSERVATORY.

This building has a revolving dome with an equatorial telescope to which the students of Astronomy have access. The transit-room and the computing-room contain the smaller instruments and the works of reference.

### THE INFIRMARY.

This building is 200 feet by 45 feet in ground measurement and three stories in height. The rooms in this building are for the use of students during illness. The sick are nursed by Sisters of the Holy Cross, and the University physician visits them daily.

### THE GYMNASIUM.

The old gymnasium was found unsuitable for the needs of the University and a new building has replaced it. The new gymnasium has a track-hall 102 feet by 156 feet on the ground and 25 feet high. This contains the baseball net,



and is used also for basketball, and military drill. There is a gymnastic room 100 feet by 36 feet, furnished with new apparatus, and below that a room of the same size, containing baths, dressing-rooms, office, and rubbing-room. The entire building is 227 feet by 100 feet in dimensions.

### OTHER BUILDINGS.

There is a number of other large buildings connected with the University; of these the principal are: Saint Joseph's Hall, Holy Cross Hall, the Community House, the Presbytery, and Saint Edward's Hall.



Parents, guardians, and kinsfolk of the students are always welcome as guests of the University while visiting Notre Dame.



## DISCIPLINE.



Official bi-monthly reports of each student's class standing will be sent to parents and guardians.

The Faculty maintains that an education which gives little attention to the development of the moral part of a youth's character is pernicious, and that it is impossible to bring about this development where students are granted absolute relaxation from all Faculty government while outside the class-room. A young man must learn obedience to law by the actual practice of obedience, not by mere theoretical appeals to honor and a non-existent virtue of obedience.

Moreover, the quiet and concentration of mind that are needed for collegiate work are not obtainable except when discipline exists.

Therefore the following regulations, shown to be salutary by experience, are enforced at the University:

1. No student shall leave the University grounds without permission from the President or the person delegated to represent him.

2. *Leave of absence will not be granted to students during the term time, except in cases of urgent necessity. There is no Vacation at Easter.*

3. Students are required to report at the University immediately after their arrival at South Bend. This rule is binding not only at the beginning of the scholastic year, but at all other times when leave of absence has been granted. Unnecessary delay in South Bend is looked upon as a serious violation of rule.

4. *Flagrant disobedience to authority, cheating in examinations, the use of intoxicating liquors, immorality, the use of profane and obscene language and unauthorized absence from the college limits are among the causes for expulsion. In a case of suspension or expulsion for such offences, no fees will be returned.*

5. No branch of study shall be taken up or discontinued without the consent of the Director of Studies.

6. The use of tobacco is forbidden except to those students of Sorin and Brownson Halls that have received from their parents written permission to use tobacco.

7. *While students of all religious denominations are received into the University, it is nevertheless a strictly Catholic institution, and all students are required to attend divine service in the College Church at stated times.*

8. The use of intoxicating liquors is strictly prohibited.

9. To guard against all clandestine and improper correspondence, the President reserves the right to supervise letters to and from students.

10. Undue attention to athletics at the expense of study will not be permitted, but students are expected to take part in outdoor sports and other games.

11. A limited number of athletic contests is permitted with college organizations from without.

12. All athletic associations of the students are strictly forbidden to countenance anything that savors of professionalism.

13. Continued violation of regulations in Sorin Hall leads to forfeiture of rooms.

14. All athletics will be governed by a Faculty Board of Control in conjunction with the Students' Committee. The President of the University and members of the Faculty will compose the Administrative Board, and reserve the right of a final determination of all questions concerning athletics. The Students' Committee will represent the student body as heretofore. The Faculty Board will determine the amateur standing of the members of the athletic teams, and apportion the finances. The President of the University, who is Chairman of the Faculty Board, will keep in close touch with all departments of athletics through the Physical Director who shall be reponsible to the President only.

By this means indiscreet and unconsidered actions of the students will be checked, and athletics put on an equal footing with those of other universities.

### LECTURES AND CONCERTS.

Each winter eminent men are invited to lecture before the students. Concerts are also given monthly by organizations from without.

## MEDALS AND HONORS.



**The Quan Gold Medal** is awarded yearly to the student in the Senior Class of the Classical Course that has the highest average rate over 80 per centum.

**The Meehan Gold Medal**, founded by Mrs. J. Meehan, of Covington, Ky., is awarded to a Senior student in the English or Classical Course for an English Essay. This medal is awarded only when the best essay has attained a fixed standard.

**The Ellsworth C. Hughes Medal**, presented by Mr. A. S. Hughes, Denver, Colorado, for the best record in Mathematics.

**The Breen Gold Medal**, founded by Mr. William P. Breen, of Fort Wayne, is awarded for Oratory.

**The Rademacher Gold Medal**, founded by the Bishop of Fort Wayne, is awarded to the student of Brownson Hall having the highest average in Christian Doctrine.

**The Barry Medal**, founded by Mr. P. T. Barry, of Chicago, is awarded in Brownson Hall for Elocution.

**The Mason Medal**, presented by Mr. George Mason, of Chicago, for the student of Carroll Hall having the best record for the Scholastic year.

First Honors are awarded to students of Sorin and Brownson Halls that have maintained throughout the year an average of at least 90 per centum for class-work and observance of regulations. A first-honor man for the first year receives a diploma, the second year a gold medal. The medal may be received also during the succeeding year of the course.

## EXPENSES.



Matriculation Fee (payable on first entrance), . . . .	\$ 10.00
BOARD, TUITION, (Latin, Greek and Modern Languages included), Lodging, Washing, and Mending of Linens, per Session of nearly Ten Months, . . . . .	300.00

## PAYABLE IN ADVANCE, as follows:

On entrance in September, . . . .	\$200.00
January 15th, . . . . .	100.00

The charge of \$300 covers the tuition fee, which is fixed at \$100 per Scholastic Year. No portion of this latter sum will be returned when students are dismissed before the close of the year, or leave for any other cause than ill health. Degrees will not be conferred on any student whose account with the University has not been settled.

There is no reduction for students that come late in September, nor for those that return late in January.

## SPECIAL EXPENSES.

While students, as a rule, are advised to confine themselves to the regular studies of the course they have entered, any of the following may be taken at the rate mentioned per Scholastic Year. The charges will be *pro rata* for any portion of the year.

Instrumental Music — Lessons on Piano and use of Instrument.....	\$45 00	Telegraphy .....	20 00
Lessons on Violin, Guitar, Flute, Cornet, Clarinet and Mandolin .....	25 00	Typewriting — Full Course (21 lessons).....	5 00
Use of each Instrument....	5 00	Phonography .....	20 00
Vocal Culture .....	30 00	Practical Mechanics.....	\$30 00
Elocution—Special Course.	10 00	Military Uniform .....	
Use of Library.....	2 00	Applied Electricity .....	40 00
“Scholastic,” College paper	1 50	Special Lecture and Concert Course .....	2 00
Artistic Drawing.....	20 00	Gymnastics — Full Course (20 lessons).....	5 00

For Laboratory Fees in Regular Courses see pages 66, 104, 107, 110.

## GRADUATION FEE.

(Payable before Commencement.)



For all Courses leading to a degree, \$10; Commercial Course, \$5.

### REMARKS.

The Entrance fee, cost of Books, Music and Laboratory fees, etc., are required with first payment.

Remittances should be made by draft, postoffice money order or express, payable to the order of the President.

Checks on local banks are not desirable, and exchange will be charged in all cases.

Term bills and other accounts are subject to sight draft if not paid within ten days after they have been rendered.

*Brownson, Sorin, and Carroll Halls are closed during the months of July and August.*

In consequence of benefactions lately received by the University, a limited number of students aspiring to the ecclesiastical state can be received at special rates. Fuller information can be obtained by addressing the President.

The year 1899-1900 will open on Tuesday, September 5th.

# Courses of Instruction.



## COURSES IN PHILOSOPHY.



### I.

(a) **Psychology of the Senses and Nervous System**—This course is a fairly comprehensive treatment of the physical basis of consciousness.

(b) **Empirical Psychology**—Psycho-physical methods and results.

(c) **Rational Psychology**—The problems of the mind. Nature, origin, and destiny of the soul.

[*One term: Lectures four hours a week; student discussions one hour a week.*]

### II.

(a) **The Theory of Knowledge**—A study of the Scholastic doctrine in relation to the teachings of Descartes, Locke, Hume, Kant, Hamilton and Spencer.

[*This course is intended to be an introduction to Logic and General Metaphysics, and will be given at the beginning of the year during the time prescribed for these studies.*]

(b) **Logic**—An examination of the various logical processes and of the methods employed in scientific investigation.

[*Two hours a week for one year.*]

(c) **General Metaphysics**—Transcendental concepts; their value in different systems of philosophy.

[*Two hours a week for one term.*]

(d) **Cosmology**—The fundamental concepts of the Natural Sciences and their place in Thomistic Philosophy, Pantheism, Monism, and Evolutionism.

*[One hour a week for one term.]*

(e) **Theodicy**—The knowableness of God; His attributes; His presence in the Universe.

*(One hour a week for one term.)*

(f) **Student Discussions**—Once a week throughout the year students will be required to read and discuss papers on various subjects in the field of philosophical inquiry.

### III.

**Principles of Ethics**—(*Q. 1.*) Man's last End and Happiness; the Purpose of Man in this Life. (*Q. 2.*) Human Acts; Responsibility; Merit; Obstacles to Human Acts. (*Q. 3.*) Origin of Morality; Hedonism; Altruism; Sympathy; Essential Difference between Good and Evil; the Constituents of Morality; the Eternal Law. (*Q. 4.*) The Natural Moral Law; its Existence and Characters; Evolution. (*Q. 5.*) The Positive Law. (*Q. 6.*) On Conscience; Good Faith; Doubtful Conscience and Reflex Principles. (*Q. 7.*) Passions in Practical Life; their Classification; their Imputability. (*Q. 8.*) The Moral Virtues; Stoicism; Epicurism; Christianity.

*[Five hours a week for one term]*

### IV.

(a) **Individual Duties**—Notions of Right and Duty. (*Q. 1.*) The Duty of Man to God; Necessity of External and Public Worship; Obligation of Prayer; the fact of Sacrifice. (*Q. 2.*) The Duty of Man to Himself; Culture of the Intelligence, the Will, the Imagination, the Memory; Care of the Body; Suicide essentially Unlawful. (*Q. 3.*) The Duty of Man to his Fellowmen; on Truthfulness and

Lying; Homicide and Self-Defence; on Duelling; on Private Ownership; Socialism; Communism; Single Tax; on the Right to Honor and Reputation; on Contracts and Usury.

(b) **Social Duties**—(*Q. 1.*) The Domestic Society and Marriage; Monogamy; Polygamy and Divorce; Relations between Parents and Children. (*Q. 2.*) Education: the Part of the Parents, the Church and the State. (*Q. 3.*) On Slavery in Ancient and Modern Times; Duties of Masters and Servants. (*Q. 4.*) On Capital and Labor.

(c) **Sociology**—Necessity of a Public Society; the City. (*Q. 1.*) Origin of the Civil and Political Organization; Theories of Hobbes and J. J. Rousseau; Source of Authority in Human Society. (*Q. 2.*) On the Divine Right of Kings; the Absolute Sovereignty of the People; the Reasonable System. (*Q. 3.*) The different Forms of Government; the Primitive Polity; the best Form of Government; Opinions of O. A. Brownson. (*Q. 4.*) On Modern Democracy; the Position of the Church; the Usurpation and Transfer of the Supreme Power; on the Government *de Facto*. (*Q. 5.*) On Despotism; is it Lawful to Resist a Tyrant? Theory of St. Thomas and Machiavelli on Government. (*Q. 6.*) The Distinction of the three Social Powers; Parliamentary and Representative Government. (*Q. 7.*) Qualities of a good Ruler; the Question of the Poor. (*Q. 8.*) Public Liberties; Freedom of the Press and of Conscience; the Right of the Sword; on War and Treaties. (*Q. 9.*) The International Law. (*Q. 10.*) Civilization. (*Q. 11.*) Church and State.

(d) **Government of the United States**\*—History of the Constitution; the Legislative Department of the U. S.; the Executive Department of the U. S.; the President and the

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\*This sketch is drawn according to the valuable ideas contained in "The American Republic," by Dr. O. A. Brownson, and "The American Commonwealth," by Mr. Bryce.

Cabinet; the Judicial Department of the U. S.; the Supreme Court; the Rights of the States and the United States; Jury, Suffrage and Elections; Ballot Systems; Parties and Party Machinery; Patriotism and Religion.

*This Course is for Classical Students.*

(e) **History of Philosophy**\*—Schools and Systems.—*Ancient Philosophy*: Pythagoras.—Anaxagoras—The Sophists and Socrates.—Plato and Aristotle.—Epicurus,—Zeno—Pyrrho.—Eclecticism and Neo-Platonism.—Cicero and Seneca. *Philosophy of the Middle Ages*—Christian Platonism: St. Augustine.—Scholasticism: St. Thomas of Aquin.—*Renaissance* and modern Philosophy: Neo-Platonism.—Francis Bacon—Thomas Hobbes—Descartes—Spinoza—Leibnitz—John Locke. Materialism.—David Hume.—Kant and his disciples.—Darwin and Monism.—A. Comte and Positivism.—Herbert Spencer—F. Huxley—Agnosticism and Evolution.

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\* The text book used is "History of Philosophy" by Alfred Weber.

## COURSES IN GREEK.



## I.

**Homer**—Odyssey.

**Xenophon**—Memorabilia. First Two Books. Accidental forms and Syntactical relations are constantly brought to the student's attention to fix in his mind the principles of Grammar.

**Prose Composition**—The main purpose of this exercise is to teach the student to write Greek according to the spirit of the Greek language. Attention is constantly directed to the difference in form of expression between the English and the Greek.

**Grammar**—Syntax reviewed. *Goodwin*.

[*Five hours a week for one term.*]

## II.

**Homer**—Odyssey.

**Lysias**—Orations, selected.

**St. John Chrysostom**—Eutropius.

**Prose Composition**—See Course I.

[*Five hours a week for one term.*]

## III.

**Homer**—Iliad. First and Fifth Books. Special study of the Homeric language and verse scansion. Grammatical and etymological explanations. Works of reference. Origin of the Homeric poems. General literary characteristics of the poems. Mythology. Homeric Theology.

**St. Gregory**—Machabees.

Exercises in Prose Composition.

[*Five hours a week for one term.*]

## IV.

**Homer**—Iliad, Sixth Book, and Cursory Reading of entire work. Books of reference and Collateral Reading as in Course III.

**Thucydides**—First Book.

Exercises in Prose Composition.

*[Five hours a week for one term.]*

## V.

(a) **Demosthenes**—De Corona. Review of Political situation and historical facts in reference to the Oration. Review of Æschines' speech on the same subject, and continued reference to the same. Analytical comparisons. Constant attention is paid, throughout the courses, to the exchange of the form of Analytical Elements of the Greek for another more in harmony with the spirit of the English language. The student must be prepared to account for any form of Etymology and to explain any rule of Syntax that he meets in the text.

**Cursory Reading** of Homer's Odyssey. Homer's works considered as the foundation of faith or the Bible of Pagan Greece.

**Practical Exercises** embodying idiomatic expressions and constructions of the authors read.

*[Five hours a week for one term.]*

## VI.

**St. Basil**—De Profanis Scriptoribus. Literary appreciation of the 4th Century of the Christian Era, the Golden Age of Christian Literature. The Greek Fathers of the Church shown to be the peers of Demosthenes and Cicero in purity of language, sublimity of style and oratorical success. The end in view turns the scale in their favor. References made to Pagan authors quoted by St. Basil. The advantages of a



Classical Education in general, and of the study of Greek in particular are dwelled upon as a mental training and preparation for the literary and scientific professions.

**Sophocles**—*Œdipus Tyrannus*. Read with special reference to the economy of the Greek Drama, its origin in religion, its religious features, its moral, its metrical mechanism and its adaptability to the Modern Stage. Grecian costumes, Grecian stage and theatrical outfits. Digest of the Theban Legends.

**Short Prose Compositions**—Special attention is here given to the Greek element in the English language, which is casually observed in all the Courses.

**Elements of Greek Literature.**

*[Five hours a week for one term.]*

## VII.

**Plato**—*Apology* and *Crito*. In connection with this author enlargements are made upon Athenian life, Athenian jurisprudence, Athenian court proceedings. Socrates, a philosopher or a sophist? His friends and his enemies.

**Euripides**—*Medea*, or *Iphigenia in Aulis*, with literary digest of the myths and legends touched upon in these dramas. The Greek Drama continued as in Course VI. Religious tendencies of Euripides.

**Pindar**—*Select Odes*. The public games of Greece. Reading at sight of Heyne's Greek notes on the Odes read in class.

**Exercises**—Modern Greek compared with the Ancient. Deviations in form and expression pointed out. Modern pronunciation discussed, but not adopted. Reading at sight of Professor's collections of Modern Greek Stories, and Anecdotes. The latter are reproduced in Ancient Greek.



**History of Greek Literature.**

*[Five hours a week for one term.]*

### VIII.

**Cursory Reading** of the Greek Fathers of the Church. St. Basil—The Martyr Gordius. St. John Chrysostom—The Return of Bishop Flavian. St. Gregory Nazianzen—Funeral Oration of Cæsarius.

**Reading at Sight**—The Professor's Epitome of the New Testament.

**Sophocles**—Philoctetes or Antigone.

**Aristophanes**—Frogs or Clouds. Greek Comedy; its nature; its aim. Political Situation, Party Spirit, and work of Secret Societies in Athens during the Peloponnesian War. Religious and Philosophical Revolutions of the time. Conservatism of Æschylos and Sophocles as compared with the complaint spirit of Euripides. Aristophanes as opportune in the 19th Century as in his own days of enlightenment.

**Modern Greek**—Reading at sight of *Ἡ Μαυρὴ Ὠραιότης*.

**History of Greek Literature.**

*[Five hours a week for one term.]*

## COURSES IN LATIN.



## I.

**Cicero**—Select Letters. Oration.

**Latin Composition** based on Cicero's text.

**Virgil**—Æneid. First and Second books. The explanations cover peculiarities of Syntax, Figures, Mythology, Versification. Collateral reading is indicated to the students.

**Prosody**—Ordinary Rules of Prosody. Practical Work.

*[Five hours a week for one term.]*

## II.

**Cicero**—De Senectute or De Amicitia.

**Latin Composition** based on Cicero.

**Virgil**—Æneid. Fourth Book with complete explanations. Fifth and Sixth Books. Collateral Reading indicated to the student.

Practice in Latin Conversation.

**Prosody**—Completed.

*[Five hours a week for one term.]*

## III.

**Livy**—Book XXI.

**Latin Composition** based on Livy.

**Horace**—Odes and Epodes. The explanations include the study of the Metrical Systems, Peculiarities of Style, Plan of the Composition, Comparison with Odes of a similar nature. Collateral reading indicated to the student.

Practice in Latin Conversation.

**Versification**—Weekly exercises. Original Latin Composition.

*[Five hours a week for one term.]*

## IV.

**Livy**—Book XXII.

**Latin Composition** based on Livy.

**Cicero**—De Oratore, First Book.

**Horace**—Odes and Epodes continued. See Course III.  
Practice in Latin Conversation.

**Versification**—Original exercises. Original Latin Composition.

*[Five hours a week for one term.]*

## V.

**Livy**—Roman History, First Book. In the reading of the text particular attention is called to the rules of Syntax—roots and derivation of words—and to Ancient History, Geography and Mythology.

Latin Composition twice a week, either paraphrases or original. Short fables and stories.

**Horace**—Epistola ad Pisones translated, analyzed and criticized from a Philological and Literary standpoint.

Three select Satires, First Book.

**Ancient Literature**—Historians and Lyric Poets: their lives, their works, their genius.

*[Five hours a week for one term.]*

## VI.

**Tacitus**—Agricola and Germania. While reading the text a comparison is made with the private and public manners of modern nations.

**Terence**—Andria. Sight reading.

**Horace**—The Literary Epistles and a few of the Moral Satires.

Weekly practice in written Composition, Latin Conversation and Versification.

**Ancient Literature**—Dramatists of Greece and Rome compared and discussed.

*[Five hours a week for one term.]*

## VII.

**Quintilian**—De Institutione Oratoria, Books Tenth and Twelfth. Translation. Explanation embraces a literary criticism of Grecian and Roman Orators, and practical remarks on Latin Idioms and the fine arts of Antiquity.

Short Orations or Dissertations, and practical Conversations take place weekly.

**Plautus**—Captivi. The study of the play gives a full knowledge of the Characters, the Plot, and the Style, the archaic Forms, and the Constructions peculiar to the author.

**Ancient Literature**—Orators, especially Demosthenes and Cicero.

*[Five hours a week for one term.]*

## VIII.

**Cicero**—De Officiis. Partly sight-reading. Besides the study of the work from a philological standpoint, the student is made acquainted with the main systems of Grecian Philosophy, and continual reference is made to Course III. in Philosophy.

Oratorical and Philosophical Compositions alternate weekly. Latin Conversation on general topics.

**Lucretius**—De Natura Rerum. Select passages. Synopsis of the poem. Statement and refutation of erroneous philosophical systems of antiquity. Analogy with the errors of our day. Style of the writer.

**Ancient Literature**—Philosophers, particularly Socrates, Plato and Aristotle, Cicero and Seneca.

*[Five hours a week for one term.]*

## COURSES IN ENGLISH.



## I.

(a) **Rhetoric**—Detailed study of good use. Barbarisms, Improperities and Solecisms. Clearness, Force and Ease, as effected by Choice, Number and Arrangement of words. Detailed study of sentences, paragraphs and whole compositions, with critical analysis of selected models. Analytical study of Descriptive Writing (scientific and artistic). Narrative Writing, with special reference to the Short Story. Expository Composition, with special reference to the Essay. Argumentation; burden of proof; presumption; methods; forms and arrangement of argument; persuasion. During a large part of the year the student is required to write a daily theme. The text-book in use is Hill's *Principles of Rhetoric*, supplemented by lectures and notes by the Professor.

(b) **Oratorical Composition**—Invention: proofs, manners, passions, topics; disposition; parts of the discourse; oratorical amplification; briefs; analysis of orations. Elements of Logic with reference to Oratory.

(c) **Readings in Class**—Spencer's *Philosophy of Style*, Gates' *Selections from Newman*. British and American Orations.

[Five hours a week for two terms.]

## II.

[One theme a week in all classes below.]

(a) **English Prosody**—Scansion, the old method and the method by musical notation; rhythmical units—quantity, accent, the phrase; blank verse, cadences, alliteration;

metre, rhyme, stanzas, French forms, the sonnets, and other lyric forms.

(b) **Dramatic Analysis**—The parts of a Tragedy: introductions, scenic passages, rising actions, climaxes, tragic incidents, falling actions, catastrophes, forces, plots, underplots, characterization, nemesis, values, unity, probability, completeness, etc. Comedy. Application to Shaksperian plays and to the modern drama.

(c) **Shakspeare**—Reading with literary and dramatic analysis of *Macbeth*, *King John*, *Julius Cæsar*, *King Richard III.*, *Coriolanus*, *As You Like It*, *Twelfth Night*, *Much Ado About Nothing*. Hudson's text is used and the entire play is read in each case.

(d) **The History of English Literature up to Shakspeare**—*A Handbook of English Literature*, by Austin Dobson, and Ward's *English Poets* are used to direct this course.

[Five hours a week for two terms.]

### III.

(a) **The Laws of the Epic**, of Prose Fiction, of the Lyric and the Essay. Critical application of the laws to models.

(b) **Shakspeare**—Reading, etc., as in Course II. c, of *A Winter's Tale*, *Romeo and Juliet*, *King Henry IV., Part I.*, *King Henry IV., Part II.*, *King Henry V.*, *A Midsummer Night's Dream*, *Antony and Cleopatra*.

(c) **History of English Literature** from Shakspeare to the nineteenth century. Models. Dobson and Ward used as in Course II. d.

[Five hours a week for two terms.]

### IV.

(a) **Shakspeare**—Reading, etc., as in Course II. c, of *King Lear*, *Hamlet*, *Othello*, *The Tempest*, *The Merchant of Venice*, *Cymbeline*, *King Henry VIII.*, *King Richard II.*

(b) **The Leading Poets and Prose Writers** of the Nineteenth Century. Lectures.

(c) **Old English**—An elementary course in Anglo-Saxon grammar and reading. (This division of Course IV. is elective.)

*[Four hours a week for two terms.]*

## V.

**Special Course** in Theme Writing for Engineering and Scientific students.

*[One hour a week for two terms.]*

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## Courses in Elocution and Oratory.



### I.

**Readings and Declamations**—This course is designed to correct defects in pronunciation and emphasis. Each student will be required to give two declamations.

*[Two hours a week for first term.]*

### II.

**Continuation of Course I.**—Each student will be required to give three declamations.

*[Two hours a week for second term.]*

### III.

**Practical Elocution**—Exercises in breathing, voice-culture, and action. The principles pronunciation and emphasis and their application in the reading of selections. Text-book, Fulton and Trueblood's *Practical Elocution*.

*[Two hours a week for first term.]*



## IV.

**Continuation of Course III.**—Further exercises in breathing, voice-culture, and action. Quality, Force, Pitch, and Time. Minute speeches and declamations. Lectures on the principles of action. Text-book, Fulton and Trueblood's *Practical Elocution*.

[*Two hours a week for second term.*]

## V.

**Oral Discussions**—The application of Formal Logic to debating. Analysis of selected argumentative speeches, and the preparation of briefs. Courses III. and IV. and a course in Logic are required for admission to this course. It is limited to 24 students.

[*Two hours a week for first term.*]

## VI.

**Shaksperian Reading**—The critical and artistic reading of two of Shakspeare's plays accompanied with stage action. The students present the play by scenes before the class. Courses III. and IV. are required for admission to this course. It is limited to 24 students, and alternates with course VII. below.

[*Two hours a week for second term.*]

## VII.

**Oratory**—A study of the great orators of ancient and modern times. Each student is required to write and deliver a biographical oration on one of the great orators. Lectures on methods of public address. Courses III. and IV. above and course I. in English are required for admission to this course. It is limited to 24 students and alternates with course VI. above.

[*Two hours a week for second term..*]

## VIII.

**Assembly Work**—This course is designed to supplement the other courses in this department. It consists of debates, short orations, minute speeches, declamations, impromptus and drill work in parliamentary law. Wednesday from 1 to 3. One hour credit.

[*Throughout the year.*]

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## COURSES IN HISTORY.



## I.

## ANCIENT HISTORY.

(a) **Ancient Greece**—To the conquest by Rome of the Hellenic world. Readings, and examinations on required texts. This course is given in an alternate year with Course I. (b).

[*Four hours a week for one year.*]

(b) **Ancient Rome** to the barbarian invasions. Readings and examinations on required texts. This course is given in an alternate year with Course I. (a).

In both courses, the student is required to become familiar with the institutions of the ancient world, and to study the same in De Coulanges' *The Ancient City*.

[*Four hours a week for one year.*]

## II.

## MEDIAEVAL AND MODERN HISTORY.

(a) **The History of the Middle Ages** from the invasion of the barbarians, and the history of the periods of the Renaissance and the Reformation to 1603. Readings and examinations on required texts.

[*Three hours a week for one year.*]

(b) **The General History of Europe** from the beginning of the 17th century to the present time. Readings and examinations on required texts.

[*Three hours a week for one year.*]

### III.

#### ENGLISH HISTORY.

**The history of the British Isles to the Revolution of 1689—**Readings and examinations on required texts. The student is required to obtain by directed reading and examinations a special knowledge of the development of the political institutions of Great Britain, using Feilden's *Constitutional History*.

[*Four hours a week for one year.*]

### IV.

#### AMERICAN HISTORY.

(a) **American History from its beginning to 1763—**Readings and examinations on required texts.

[*One hour a week for one year.*]

(b) **American History from 1763 to the present time—**Readings, lectures and examinations. There is first given by lectures an outline of the political condition of the Colonies under the Crown, the causes leading up to the Revolution of 1776, the Revolution, the political status of the States after Independence, the Confederation of 1781, the causes leading to the formation of the Constitution, and the Constitutional Convention. This is followed by a thorough treatment of the political history of the United States since 1789, using as an outline text, Johnson's *American Politics*.

[*Three hours a week for one year.*]

## COURSES IN POLITICAL SCIENCE.



(a)

### ECONOMICS.

I. **The Elements of Economics**, viz.:—Land, Human Exertions and Capital; Value, Money and Credit; Rent, Interest, Profit and Wages; and Population and Consumption. The text-book used is Walker's *Manual of Political Economy*.

*[Four hours a week for five months.]*

II. **Industrial History** and the history of Economic Thought. Readings, lectures and examinations on required texts.

*(Three hours a week for one year.)*

III. **Money, Credit and Banking**, with special treatment of the monetary experience of the United States. Lectures, readings, and examinations on required texts.

*[Three hours a week for five months.]*

IV. **Distribution**—A course covering the Land and Labor Questions and Socialism. Lectures, readings and examinations on required texts.

*[Three hours a week for five months.]*

(b)

### POLITICS.

V. **The Elements of Politics**—Lectures and examinations on required texts.

*[Two hours a week for five months.]*

VI. **The American Constitution** and Political Institutions.

Lectures, readings, and examinations on required texts.

[*Two hours a week for five months.*]

**VII. Jurisprudence**—A course covering (a) The outlines of the Science of Law, (b) The elements of International Law, and (c) Lectures on selected topics of Roman and Canon Law. Lectures, readings and examinations on required texts.

[*Two hours a week for one year.*]

(c)

#### SOCIAL SCIENCE.

**VIII. The Elements of Sociology**—Lectures, readings and examinations on required texts.

[*Two hours a week for five months.*]

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## COURSE IN ROMANCE LANGUAGES.



This Course includes the study of French, Spanish, Italian, Portuguese, Old French, Provençal.

Its principal aim is to impart an accurate reading knowledge of literary works written in these languages. In the study, however, of Old French and Provençal special attention will be paid to Philology.

#### FRENCH COURSES.

##### I.

Houghton's *French by Reading*. *Un Cas de Conscience*, Super's *Reading from French History*.

[*Two hours a week.*]

## II.

French Composition. L'Avare. Le Voyage de M. Perichon. Le Roi des Montagnes. Picciola. Zola's Le Rêve.

[*Two hours a week.*]

## III.

La Poudre aux Yeux. Athalie. Hernani. Les Confessions d'un Ouvrier. Le Barbier de Séville. Le Malade Imaginaire. Les Fourberies de Scapin. Pourceaugnac. Les Fâcheux. L'Amour Médecin. Le Misanthrope. Cinna. Polyeucte.

[*Two hours a week.*]

N. B.—The books used are not necessarily the same every year.

## SPANISH COURSE.

A two years' course. Besides the reading of Modern Authors the masterpieces of Calderon de la Barca, Lope de Vega, Cervantes, etc., will be particularly studied. An optional course of Old Spanish preceded by the philology of the language, enabling the students to better understand the masterpieces of Old Spanish is also offered.

## ITALIAN COURSE.

A two years' course. The chief work of this course is a critical study of Dante's Divina Commedia. Reading from Tasso, Petrarca, Ariosto's Satires, Manzoni, etc.

## PORTUGUESE COURSE.

One year course. Os Lusíadas will be specially studied.

## OLD FRENCH.

Special attention will be paid to the laws underlying the formation of the French language from the popular Latin. For this purpose a work like Brachet's *Grammaire*

*Historique* will be studied. It is under this point of view that Old French authors will be read, especially *La Chanson de Roland*.

### PROVENÇAL COURSE.

Language and literature, with reading from the works of the Troubadours.



### REMARK.

With the exception of French, no one will be accepted for these courses unless he can satisfy the Professor of his ability to read Latin at sight.



## COURSES IN GERMAN.



### I.

**Grammar**—*Joynes-Meissner*. Deutsches Lesebuch, *Bone*.  
**Themes**—Original and imitation work.

[*Three hours a week.*]

### II.

**Special Course** for students in the English and Scientific Courses.

**Grammar**—*Joynes-Meissner*.

**Readings** from scientific and literary works.

[*Three hours a week*]

### III.

**Readings** from scientific and literary works.

[*Three hours a week.*]



## COURSES IN PURE MATHEMATICS.



### I.

**Algebra**—This course includes a study of the binomial theorem, the theory of logarithms, choice, chance, variables and limits, series, determinants. Then follows a thorough study of the general properties and solution of equations, embracing the subjects of derivatives, transformation, detached coefficients, surd and imaginary roots, incommensurable roots, limits of roots, biquadratic equations; Des Cartes' and Cardan's rules; Sturm's theorem; Horner's method; roots of complex number and trigonometric solution of cubic equations.

*[Five hours a week for one term.]*

### II.

**Trigonometry, Plane and Spherical**—Development of general formulæ; functions of a single angle; functions of related angles; functions of sums and differences; functions of double angles and half angles; functions of multiple angles; changing the product of functions into the sum of functions, and the sum of functions into the product of functions; circular functions; development of functions; transformations; solution of triangles; construction and use of tables. The preceding work embraces the general topics studied in the course of plane trigonometry. Additional exercises involving application of theoretical principles are added by the instructor.

In Spherical Trigonometry are studied:—General properties of spherical triangles; solution of right and oblique spherical triangles; special methods involving application of Napier's rules and analogies, and Gauss's equations;

determination of species; spherical excess; area of spherical triangles; miscellaneous applications; astronomical applications. This Course is supplemented by many practical problems and exercises.

*[Plane Trigonometry, five hours a week for twelve weeks.  
Spherical Trigonometry, five hours a week for eight weeks.]*

### III.

**Analytic Geometry**—This Course includes a study of the point and right line; conic sections, their equations and properties; discussion of the general equation of the second degree containing two variables; higher plane curves; equations of the third degree; different systems of coordinates; transformation of coordinates; spirals; an elementary course in geometry of three dimensions, embracing the point, straight line, plane and surfaces of revolution; transformation of coordinates; quadric surfaces and supplementary propositions.

*[Five hours a week for one term.]*

### IV.

**Calculus, Differential**—This Course, as also Course V., is designed to meet the requirements of Engineering students. It includes a study of the methods for the differentiation of algebraic, logarithmic and exponential, trigonometric, and inverse trigonometric functions; successive differentiation and differential coefficients; treatment of implicit and compound functions; expansion of functions; indeterminate forms; partial differential coefficients of the first order and of higher orders; direction of curvature; radius of curvature; envelopes; singular points of curves; maxima and minima of functions of one independent variable, and of several independent variables; tracing curves; differentials of arcs, plane areas, surfaces and volumes of revolution.

*[Five hours a week for one term.]*

## V.

**Calculus, Integral**—Integration of elementary forms and of rational fractions; integration by rationalization and by parts; successive integration; multiple integrals; definite integration and the constants of integration; integration between limits; disposing of the constant of integration; double integration applied to plane areas; rectification of plane curves; quadratures of plane areas and surfaces of revolution; surface and volume of any solid; intrinsic equation of a curve. This Course is supplemented by numerous exercises and examples.

[*Five hours a week for one term.*]

## VI.

**Elective Work**—The prescribed Courses in Pure Mathematics are I. to V. inclusive. The following advanced Courses are offered, based on standard authors. The textbooks are not necessarily the same every year. The number of students necessary to constitute a class in any one subject must be at least five.

(a) Higher Algebra, *Hall and Knight, Smith, Chrystal*.  
(b) Advanced work in Trigonometry, *Todhunter, Lock*.  
(c) Determinants, *Peck, Hanus, Muir*. (d) Theory of Equations, *Burnside and Panton*. (e) Differential Equations, Elementary Course, *Murray*. (f) Advanced Calculus, *Byerly, Todhunter, Williamson*. (g) Advanced Analytic Geometry, *Salmon*. (h) Analytic Geometry of Three Dimensions, *Aldis, Frost, Salmon*. (i) Quaternions, *Hardy*, with *Kelland and Tait* as reference.

[*Three hours' recitation a week for one subject.*]

## COURSES IN APPLIED MATHEMATICS.



## I.

**Descriptive Geometry**—In this Course are considered problems on the point, right line, and plane; single curved, double curved, and warped surfaces; problems relating to tangent planes to single curved, double curved, and warped surfaces; intersection of surfaces by planes; tangencies; development of surfaces; spherical projections; orthographic, stereographic, globular, cylindrical, and conic projections; construction of maps; shades and shadows; linear perspective; isometric projections; theory and plates. Numerous practical problems and exercises requiring the application of the principles of Descriptive Geometry are added by the instructor.

*[Three hours a week for two terms.]*

## II.

**Surveying**—This Course comprises the whole theory of land surveying and levelling; the use and adjustment of the transit, compass, level, and plane table; methods of measuring; relocation of boundaries; supplying omissions; obstacles to measurement; computations; field notes and plots; laying out land; parting off land; dividing up land; Public Lands survey.

*[Five hours a week for one term.]*

## III.

**Surveying**—Field practice and application of theory; adjustments and use of instruments in the field; solution of problems in the field the theory of which is taught in the

class-room; practice in keeping field notes; computations and plots.

*[Four hours a week for the spring term.]*

#### IV.

**Higher Surveying**—This Course is a more complete treatment of the theory of surveying than Course II. and cannot be taken until the completion of that course. It treats of the adjustment, use, and care of all kinds of Engineering instruments; problems pertaining to solar attachment; topographical surveying with the transit and stadia; mining surveying; mining claims; survey of mines with shafts and drifts; determining positions of ends of tunnels, and depths below surface; theory of hydrographic and city surveying; geodetic surveying and levelling; measuring base lines; adjustments of angles, triangles, and quadrilaterals; latitude and azimuth; time and longitude; changing mean time into sidereal time and sidereal time to mean time.

*[Five hours a week for one term.]*

#### V.

**Surveying**—Exercises in the field in the adjustments and use of engineering instruments; stadia and plane table surveying in the field; levelling; practice in hydrographic surveying.

*[Four hours a week for the spring term.]*

#### VI.

**Railroad Surveying**—This Course comprises all the theory pertaining to reconnoissance and preliminary survey for a railroad; theory of maximum economy in grades and curves; location of curves by deflection angles and offsets; obstacles to location of curves; special problems in curves; theory of compound curves; turnouts and crossings; compound transition curves; cubic parabola; curving the rail on curves and

elevation of outer rail; easing grade on curves; vertical curves; earthwork and prismoidal formula; theory of excavation and embankment; correction in excavation on curves; cross-sectioning.

*[Five hours a week for one term.]*

## VII.

**Railroad Surveying**—Exercises in the field; staking out and running tangents, simple, compound and transition curves; execution on the ground of many problems previously treated theoretically; survey for a short line of railroad, levelling, cross-sectioning, and setting slope stakes; making profiles and maps; calculating the necessary excavations and embankments and cost of construction; culverts.

*[Four hours a week for one term.]*

## VIII.

**Analytic Mechanics**—The aim of this course is to prepare students of Engineering for the study of the courses of Applied Mechanics. The course comprises a study of the fundamental principles of Statics, Kinematics, and Kinetics. The subjects selected are studied with the object of thoroughly preparing the engineering students to pursue the technical and practical branches of their respective courses. Some of the topics considered in this course are: work, energy, conservation of energy, power, composition and resolution of forces, centre of gravity, centre of mass, moment of inertia, acceleration, dynamics of rigid bodies, laws of friction, etc.

*[Five hours a week for one term.]*

## IX.

**Mechanics of Materials**—This course is intended to meet the requirements of Engineering students, and to prepare



them by a study of the action and effect of forces on beams and structures to design economically and intelligently the parts entering into a completed structure. The course comprises a study, according to the latest and most approved methods, of tension and its effect on materials, compression, theories of flexure and rupture from transverse stress, shearing stress, transverse strength, beams of uniform resistance, various forms, and loaded in any manner; design and strength of beams and columns, effect of long continued strains, and repeated strains, factor of safety and working stresses, strength of pipes and cylinders, theory and practice of riveting, torsion, transmission of power by shafts, continuous girders, equations of curves of deflection, theorem of three moments, moment at any support, etc.

*[Five hours a week for one term.]*

## X.

**Bridges and Roofs**—This Course comprises a study of the different systems of trussed bridges and roof trusses, and the calculation of the strains produced when loaded in any manner, the weight of the structure and the effect of wind included. Both graphical and analytical methods are used. Besides the various systems of trussed bridges, which are studied in detail, the plate girders, suspension bridges, cantilever bridges, draw bridges, and roofs of various designs are given equal attention, the purpose being to familiarize the student with the different forms and to enable him to design and to estimate the cost of construction.

*[Three hours a week for one term.]*

## XI.

**Graphical Statics**—This Course teaches the determination of stresses in framed structures by the graphical method.



Shearing forces, bending moments, centres of gravity, and moments of inertia are graphically determined by the application of the principles of the force and equilibrium polygons; as also stresses in bridge and roof trusses; graphical treatment of the arch, symmetrical and unsymmetrical cases; graphical method for arch-ribs of hinged ends, and of fixed ends; stress diagrams; temperature stresses; braced arches; graphics applied to continuous girders. This Course is supplemented by full explanations, notes, examples, and problems.

*[Three hours a week for one term.]*

## XII.

**Engineering**—This Course is taken by students of Civil Engineering in the Senior Year, and teaches the principles of the science of Civil Engineering and the most approved methods of constructing engineering works, such as piers, abutments, foundations, coffer dams, reservoir walls; instruction as to the types of structures suitable for different localities; economy of construction and framing; properties of building materials, as wood, stone, cement, brick, iron; methods of testing, methods of preparation, preservation and cost; construction of masonry arches, tunnels, sewers, highways, and city streets; discussion of framed structures of different types; river and harbor improvements; canals; seacoast defenses.

*[Five hours a week for two terms.]*

## XIII.

**Sanitary Engineering**—This Course is a study of the principles and methods of drainage and disposal of sewage in populous districts; shape, material and calculation of sewers; catch basins, flushing, and ventilation; separate and combined systems compared; pollution of rivers; chemical precipitation; results and cost of purification; general munic-

ipal and domestic sanitation; inspection of neighboring works.

*[Two hours a week for one term.]*

#### XIV.

**Hydromechanics**—This Course is a thorough study of the theory of hydrostatics, hydraulics, and hydrodynamics, to which are added many practical exercises. The subjects considered are the transmissions of pressures; center of pressures; velocity of flow from orifices of various shapes; fluid friction; Bernoulli's theorem with friction; Chezy's formula; Kutter's formula; flow over weirs, and through tubes; flow in pipes; loss of head in friction and other losses; flow in conduits, canals, and rivers; velocities in cross section; methods of gauging the flow; measurement of water power; dynamic pressure of flowing water; designing of water works and standpipes; hydraulic motors and relative merits; dynamics of gaseous fluids; flow through orifices by water formula; with isothermal expansion; with adiabatic expansion.

*[Five hours a week for one term.]*

#### XV.

**Stereotomy**—This Course comprises a study of the application of the principles of Descriptive Geometry to the determination of the forms and sizes of the stones used in the construction of the different classes of arches and masonry structures. This Course is given by lectures in the Drawing Room, explaining the construction of templets, and use of directing instruments; also explanations of methods of drawing plans, elevations, and developments of oblique arches, wing walls and the like. A certain number of plates and drawings is required, illustrating the methods of performing practical work.

*[Two hours a week for one term.]*

## XVI.

**Geodesy**—This is an elementary Course prescribed for Civil Engineering students in the Junior Year, and comprises a study of the instruments and methods of observation; base measurements and field work of the triangulation; method of least squares, elementary course; calculation of the triangulation, and theory of probable errors; geodetic latitudes, longitudes, and azimuths. This is followed by a brief discussion of the figure of the earth.

*[Four hours a week for one term.]*

## COURSE IN ASTRONOMY.



### I.

**Astronomy**—Descriptive and Practical. This Course comprises a study of astronomical instruments, their use and adjustment, and methods of observation; problems of finding time, latitude, and longitude; observatory practice; methods of finding the form, size, mass, and density of the earth; earth's orbital motion; equation of time; precession, nutation, aberration, and parallax; general description of the sun; description of eclipses and computation; planetary orbits and computation; problem of two bodies; problem of three bodies; disturbing forces; methods of determining the diameters, masses, densities, times of rotation of the planets; determination of the sun's horizontal parallax and distance, various methods; description of comets, meteors, nebulae, and fixed stars; cosmogony and the nebular hypothesis.

*[Three hours a week for two terms.]*

## COURSES IN MECHANICAL ENGINEERING.



## I.

**Thermodynamics**—The first term is given to a theoretical study of the steam engine, gas engine, and other heat motors involving the laws of thermodynamics of gases, saturated vapors and superheated steam. During the second term the applications of the studies of the previous term are dwelt upon and prime movers, the injector, condenser, refrigerating machinery, boilers, pumps and hydraulic machinery are studied in detail. Frequent reference is made to trade catalogues, of which an adequate supply should be obtained by the student. The text-book used is Thurston's *The Steam Engine*.

[Five hours a week for two terms.]

## II.

**Materials of Engineering**—This Course, supplemented by shopwork and laboratory work in testing materials of construction, is designed with the purpose of acquainting the student with the properties of the materials he will use in his profession. Tensile and shearing strength, elasticity and resistance are studied, together with the effects of strain, intermittent loading and impact. The process of manufacture of the most important materials is taken up and estimates of the cost of construction at the market prices complete the work. Thurston's *Materials of Engineering* is the text-book used.

[Five hours a week for one term.]

### III.

**Steam Engine Design**—In this Course the forms and sizes of steam engines, computation of dimensions and advantages and adaptation of special forms of engines for specific work are taken up which give the student a thorough knowledge of constructive detail. The latest researches and contemporary practice may be consulted in the numerous publications found in the University Library. During the first term of the Senior Year is required the complete design with working drawings of a simple non-condensing steam engine for a specific purpose. The second term is given to designing a multiple expansion, jacketed, condensing engine for marine service. The text-book used is Whitham's *Steam Engine Design*.

*[Five hours a week for two terms.]*

### IV.

**Steam Boilers**—This subject is treated much as that of the steam engine. The determination of sizes of parts from consideration of strains, thickness of shells, size of rivets, braces, furnaces and proper methods of connection of boilers with efficiency of furnace and life of boiler, are some of the subjects considered. The method of determining the efficiency of fuels, heating surface, heights of chimneys, boiler mountings, and materials used in construction are also discussed.

*[Three hours a week for one term.]*

### V.

**Kinematics**—This Course treats of the geometry of machinery, the determination of the paths of the various parts of an elementary combination and the constraining of the parts to move in these paths. The general theory is then applied to cams and gear teeth, the relative motion of

machine parts and kinematic trains, belts, pulleys, speed cones, link work and other aggregate combinations. Barr's *Kinematics of Machinery* is the text-book used.

[Five hours a week for one term.]

## VI.

**Machine Design**—This work involves a study of the form and strength of machine parts as applied in designing with computation of dimensions for fastenings, bearings, rotating pieces, belt and tooth gearing, etc. The derivation of rational formulæ and the determination of empirical formulæ are included and applied in designing. The text-book used is Unwin's *Elements of Machine Design*.

[Three hours a week for one term.]

## VII.

**Valve Gears**—This Course includes a complete study of the Zeuner diagram as applied to slide valves and the principal automatic cut-off engines. The radical gears, such as Hackworth, Walschaert, Marshall and Joy are treated in the same way and in conclusion the student is made familiar with the various types of Corliss valves, shifting eccentrics and link motions. The text-book is Spangler's *Valve Gears*.

[Two hours a week for one term.]

## VIII.

**Mechanical Laboratory**—The work taken up includes a study of the methods of testing the steam engine under varying running conditions, valve setting, calibration of thermometers, gauges and indicator springs, use of Prony brake, Weber and Emerson dynamometers, Pelton water wheel, Wier calibration, etc. Text-book, Carpenter's *Experimental Engineering*.

[One afternoon each week for one term.]



## IX.

**Thesis**—Each candidate for a degree in this department must present for graduation a thesis of considerable magnitude which will exhibit his knowledge of the course he has followed. It may embrace designing, experimental investigation or original research in a subject selected by the student and approved by the Professor. The major part of the second term, Senior Year, is devoted to the work and graduation is conditional upon the knowledge of Mechanical Engineering displayed in its preparation.

*[Twelve hours a week for one term.]*

## X.

## SHOPWORK.

(a) **Woodwork**—Exercises in planing, sawing, splicing, framing, scroll-sawing and turning.

*[Five hours a week for second term, Freshman Year.]*

(b) **Applications of Carpentry** to pattern-making, cores, etc., including parts of machines, pipe joints, cranks and bearings.

*[Four hours a week for one term.]*

(c) **Iron Forging**, welding, annealing, shaping, tool making, tempering and case hardening.

*[Four hours a week for one term.]*

(d) **Benchwork** in iron, including surface chipping, key-setting, draw-filing, scraping and polishing.

*[Five hours a week for one term.]*

(e) **Accurate Work** on lathe, planer, shaping and milling machines. Construction of machine tools, reamers, taps, twist-drills, gear wheels and complete machines.

*[Five hours a week for one term.]*

## COURSES IN ELECTRICAL ENGINEERING.



### I.

**Applied Electricity**—A course of lectures and recitations, supplemented by laboratory practice, on the general theory of electricity and magnetism and its application to practical work, as follows: Setting up and testing primary and secondary batteries, systems of call bells, electric gas lighting appliances, fire and burglar alarms, telegraph and telephone lines, switchboards and accessories.

Experiments with induction coils, magnets, switches, voltmeters, ammeters, wheatstone bridges, galvanometers and other measuring instruments. The study of direct current generators and motors, arc and incandescent lighting systems, street railway machinery and appliances, electric heating and forging, electrolytic processes, etc.

*[Five hours a week for two terms.]*

### II.

**Applied Electricity**—Lectures and laboratory work on the construction and testing of switches, magnets, measuring instruments, induction coils, etc. The calculation of sizes of wire and location of circuits for lighting and power, the experimental study of alternating current machinery and accessories.

If the student has acquired sufficient skill in handling tools in his shopwork he may design and build a small dynamo, starting with the rough castings, doing all the fitting and finishing, winding and adjusting, and finally testing for insulation, efficiency and adaptability to special purposes. This Course must be preceded by Course I. Both

I. and II. are required in the Short Course in Electrical Engineering; they are elective for general students and those studying telegraphy.

*[Five hours a week for two terms.]*

### III.

**Electricity and Magnetism**—The relations of currents to magnetism, magnetic units, permeability, hysteresis and other magnetic phenomena, solution of problems. Recitations and lectures. Text-book, Ewing's *Magnetic Induction*.

*[Two hours a week for two terms.]*

### IV.

**Dynamo-Electric Machinery**—Recitations on the physical theory of dynamo machines, armature actions and reactions, characteristic curves, mechanical points, theory of armature winding, the mathematical theory of alternating currents, phase relations, modern forms of single phase and multiphase generators and motors, design of transformers.

*[Five hours a week for two terms.]*

### V.

**Electrical Laboratory**—Practical work at wiring buildings for lights and power, testing circuits for insulation and grounds, construction and operation of storage batteries, management and care of dynamos, characteristic curves of particular machines under different conditions, efficiency tests of motors by absorption dynamometer methods, alternating current dynamo and transformer tests, the testing of storage batteries, and complete plant-efficiency tests. Careful notes are taken. This course is supplementary to Course IV. and both must be preceded by Course III.

*[Five credit hours a week for two terms.]*

## VI.

**Drawing**—The designing and making of working drawings of switches, resistances, and other electrical apparatus. Calculation of sizes of wire and location of circuits for lighting buildings. Complete drawings of direct and alternating current dynamos. Laying out plants for power and lighting.

*[Three credit hours a week for two terms.]*

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## COURSES IN ARCHITECTURE.



## I.

**History of Architecture**—Lectures on Egyptian, Greek, Roman, Byzantine, Gothic and Renaissance styles.

*[Three hours a week for two terms.]*

## II.

**Architectural Designing**—Drawing and rendering in pen and ink and water colors of the elements employed in Classical and Renaissance design. The principles of planning and composition. Monumental structures. Problems in design involving the use of the classic orders, the Gothic and Renaissance styles. Interior decorations.

*[Ten hours a week for two terms.]*

## III.

**Specifications and Contracts**—Lectures and practice in the preparation of specifications and contracts for architectural structures.

*[Two hours a week for one term.]*

## IV.

**Photography**—Lectures on lenses, the camera, and the manipulation of dry plates. Practice in exposing, developing and printing. Copying, enlarging. Making of lantern slides.

[*Two hours a week for one term. Laboratory fee, \$10.*]

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For references to the drawing and mathematical courses see pages 69, 48, etc.

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## Courses in Artistic Drawing and Painting.



In this department the aim is to lay a thorough foundation in drawing and painting for those that wish to make art a profession, but the courses are so arranged as to be accessible to other students. The system of teaching which, is that followed in the best art schools, is intended to develop the individuality of each student, so that with a good understanding of the principles of art he may interpret nature according to his own temperament.

The work is done altogether from cast, object, and nature. The immediate surroundings of the University buildings, the lakes and the Saint Joseph River offer many beautiful subjects for the study of landscapes, and the classes are taken out in the summer for this study.

To the old collection of casts has been added a new one, which was carefully selected at the National School of Fine Arts in Paris, where all the casts are moulded directly from the originals. The collection is as follows:

**Full Figure**—The Diadumenos (British Museum); the Doryphoros (Naples). These two figures are full size.

The following figures are reduced mathematically: The Discobolus; the Venus of Milo; the Slave of Michelangelo; the Achilles; the Fighting Gladiator (Louvre), and Houdon's Anatomical Figure.

**Busts and Heads**—Asiaticus (Paris); Brutus (Rome, the Capitol); Cato (Rome, the Vatican); Cicero (Rome, the Capitol); Dante (Florence, Uffizi); Agrippa (Louvre); Venus (Vatican); A Centurion (Naples); Ariadne (the Capitol); Psyche of Naples (Naples); a Vestal (Vatican); Niobe (Vatican); the Two Daughters of Niobe (Florence).

Among the old busts are the Apollo Belvidere, the Antinous, Bacchus, Juno, Mercury, Demosthenes, etc.

Besides, there is a complete set of decorative and architectural ornaments, taken from monuments of antiquity, the middle ages and the Renaissance, and of elements of the human figure (hands, feet, etc.) from the antique, and some anatomical pieces.

## COURSE I.

### Elementary Class.

(a) Drawing from casts of ornaments purely geometrical, such as moldings, ovoloes, dentels, etc. Sketching from simple objects.

(b) Drawing from casts of ornaments of which the elements are living forms, such as ornamental leaves and flowers. Sketching from natural leaves and flowers.

(c) Drawing from architectural elements, such as pedestals, bases, shafts, cornices, etc. Lectures on perspective, direction of the principal lines in relation to the horizon. Elementary notions on the five orders of architecture.

(d) Drawing from casts of the human figure: hands, feet, masks, etc. Architectural ornaments. Sketching from familiar objects.



## COURSE II.

### Antique Class.

(a) Drawing from the antique of heads and busts. Still life drawing. Sketches of landscapes from nature. Selection of a subject. Composition in landscape. Applications of perspective.

(b) Drawing from the antique, full figure. Occasional studies of the head from the living model. Sketching from the costumed model. Still life in water colors. History of art.

## COURSE III.

### Life Class.

(a) Drawing from life. Artistic anatomy. Anatomical studies from the collections of Science Hall. Still life painting in water colors and oil. Landscape painting. Drawing for illustration.

(b) Painting from life. Portraiture. Historical composition.

**Sketch Class**—One hour a week. This class is open also to the students in the Mechanical Drawing classes. The students have themselves an organization, "The Crayon Club," the object of which is to sketch College scenes and to do illustrative work: these sketches are brought into class and criticised.



## Courses in Mechanical Drawing.



The instruction begins with sketching from blocks, of various geometric forms, so that the hand and eye may be trained in Outline Drawing in pencil and pen. Then follows the study of light and shade.

After considerable practice, and when a thorough knowledge of freehand drawing has been acquired, the use of instruments is taken up. A large drawing hall for advanced students in the engineering courses is on the second floor of the Engineering Building. Beginning with the instruments, attention is given to accurate draughtmanship upon plates, illustrating problems in Civil, Electrical and Mechanical Engineering. This work is continued throughout the Courses.

### I.

**Freehand**—The work consists of sketching with pencil and pen from flat copies and models of machine parts and freehand lettering. Later in the term, the use of instruments, section-lining and lettering are taught. Text-book, Thorne's *Junior Course of Mechanical Drawing*.

[Two hours a week for one term]

### II.

**Projection Drawing**—The work embraces the principles of projections, methods of shop-drawing, tinting, tracing, blue printing, line-shading and the preparation of working

drawings of complete machines. Text-books, Thorne's *Intermediate Mechanical Drawing*, and Low and Bevis' *Manual of Machine Drawing and Design*. This Course must be preceded by Course I.

[*Two hours a week for two terms.*]

### III.

**Descriptive Geometry**—A series of accurate plates are made, illustrating the principles of orthographic and spherical projections, shades and shadows, perspective and isometric projections. Text-book, *Hal*.

[*One hour a week for first term, and two hours a week for second term.*]

### IV.

**Kinematic Drawing**—Designing of cams and gear teeth, complete working drawings of machines involving the application of kinematics and the computation of dimensions. Reference-book, Low and Bevis' *Manual of Machine Drawing and Design*.

[*Two hours a week for two terms.*]

### V.

**Topography**—Pen and colored topographical drawing, conventional signs, map drawing from notes taken from surveys. This Course must be preceded by Course I.

[*Four hours a week for one term.*]

### VI.

**Masonry**—Drawing and designing plans, elevations and sections of masonry constructions, foundations, dams, piers, abutments, culverts and arches.

[*Four hours a week for one term.*]

## VII.

**Bridge Designing**—Proceeding from simple framed girders to complete bridge-trusses of various designs. Complete design of a railroad bridge and detail drawings.

*[Four hours a week for two terms.]*

## VIII.

**Freehand**—The principles of freehand drawing in pencil and pen from objects, and later from biological specimens, plants, animals and microscopical preparations.

*[Two hours a week for two terms.]*

## IX.

**Freehand**—Advanced drawing from plants and anatomical dissections of animals. Illustrations for publications.

*[Two hours a week for two terms.]*

## COURSES IN CHEMISTRY.



### I.

(a) **General Descriptive Chemistry**—Lectures and Recitations. A complete study of the elements and their most important compounds, following the classification based on Mendeléeff's Law, and including a thorough discussion of the theories of the science. Careful attention is given to technical chemical processes and industries, and to the writing of chemical reactions. Text-book, *Newth*.

[*Two hours a week for two terms.*]

(b) **Experimental Chemistry**—A Laboratory Course to accompany Course (a), the work consisting of the preparation, by the student, of the elements and their more typical compounds, determination of molecular weights, verification of the fundamental laws of chemistry, etc. During the latter part of the Course, special attention is given to the characteristic reactions of the metals and to the principles of chemical analysis.

[*Two laboratory hours a week, with discussion, for two terms.*]

### II.

**Qualitative Chemical Analysis**—The work of this Course comprises the study, in the laboratory, of the reactions involved in the separation and detection of the more common inorganic bases and acids, the analysis of salts, mixtures of salts, and complex substances such as earths, ores, ashes, etc. Text-book, *Appleton*, supplemented by lectures.

[*Five laboratory hours a week, with recitation, for one term.*]

## III.

**Quantitative Chemical Analysis**—A laboratory study of the principles involved in the quantitative separation and estimation of substances, both gravimetrically and volumetrically. Complete analysis of a number of simple salts like Baric chloride, with partial analysis of substances such as steel, lye, drinking-water, etc. Reference-book, *Fresenius*. [*Five laboratory hours a week, with recitation, for one term.*]

## IV.

**Organic Chemistry**—Lectures, recitations, and laboratory work. A systematic study of the compounds of Carbon, involving the preparation, by the student in the laboratory, of the more important and typical organic compounds and the investigation of their properties. Ultimate organic analysis. Text-book, *Remsen*.

[*Seven laboratory hours a week, with two lectures or recitations, for one term.*]

## V.

**Urinary Analysis and Toxicology**—A Course of laboratory exercises in the methods employed in the detection and estimation of the constituents of the urine, and of the alkaloids and principal organic poisons. Text-book, *Witthaus*.

[*Five hours a week for one term.*]

## VI.

**Technical Chemical Analysis**—An advanced course, intended for students of General Science specializing in chemistry. Special courses in gas analysis, water analysis, sugar analysis, commercial organic analysis, etc., at the option of the student.

[*Five to fifteen laboratory hours a week for both terms.*]

## VII.

**Organic Chemistry**—Chiefly laboratory work. An advanced course, intended for General Science students specializing in chemistry.

[*Ten to fifteen laboratory hours a week for both terms.*]

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## COURSES IN PHYSICS.



## I.

**Elementary Physics**—A complete Course of recitations and lectures, including mechanics, heat, sound, light, electricity, and magnetism. The work is fully illustrated by experiments

[*Five hours a week for one term.*]

## II.

**General Physics**—In this Course there is a more extended treatment of the same subjects than is given in Course I. Mathematical principles are applied to physical phenomena. Special attention is paid to accuracy in the mathematical work and in the statements of the principles involved. Lectures and recitations, using Carhart's *University Physics* as a text-book.

[*Three hours a week for two terms.*]

## III.

**Physical Laboratory**—Manipulation of apparatus. Length, mass and time measurements. Elementary work in density, elasticity, heat, light, and sound. The student is taught to depend on his own resources and to use the reference library. Careful notes are required of all experiments performed.

*[One hour a week for one term]*

## IV.

**Physical Laboratory**—Special advanced work in heat, light, mechanics, sound, electricity, and magnetism. Accuracy in observations and in the calculation and recording of results is required. Students may specialize here according to the college course which they are following. This Course must be preceded by Courses II. and III. For list of apparatus see page 14.

*[Three hours a week for two terms.]*



## COURSES IN BOTANY.



### I.

**Elementary Botany**—Lectures, recitations, and laboratory work. A study of the morphology of the root, stem, leaf, flower, fruit, and seed. The development of the embryo and the processes of pollination and fertilization. Microscopic study of the vegetable cell, of its products, of cell formation, and of plant tissues. Simple experiments demonstrating various physiological phenomena. The structure and reproduction of the Algæ, Fungi, Mosses and Ferns. The analysis of Phanerogams occupies the time during the spring months, and the student is made familiar with the local flora. Text-books, Bastin's *College Botany* and Gray's *Manual*.

[*Five hours a week for two terms.*]

### II.

**Botanical Laboratory**—Supplementary to Course I. Special work on the Thallophyta and Bryophyta. Plants under these headings are collected and put before the student that he may become more familiar with their morphology, structure, etc. This course is to accompany or be preceded by Course I.

[*Two hours a week for one term.*]

### III.

**Advanced Botany**—Lectures, recitations, and laboratory work. The work in this course is essentially the same as that laid out in Vine's text-book of Botany. Special work is required in one particular group of plants. Herbarium

study is encouraged as well as the collecting and preparing of plants for preservation. During the spring months frequent excursions are made into the neighboring fields and woods and the local aquatic and land flora are collected and studied.

*[Ten hours a week for two terms.]*

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## COURSES IN ZOOLOGY.



### I.

**Elementary Zoology**—Lectures and recitations. General ideas on the animal kingdom. Animals and plants defined. The homology and analogy between the organs and parts of animals. The morphology, classification, structure, development and relationship of the types of vertebrates and invertebrates. Text-book, *Nicholson*.

*[Five hours a week for one term.]*

### II.

**Laboratory**—Supplementary to Course I., chiefly invertebrate work, including a study of microscopic forms of the Protozoa and Coelenterata. Work in Entomology, etc.

*[Two hours a week for one term.]*

### III.

**Invertebrate Zoology**—Lectures, recitations, and laboratory work. In this course there is a more extended treatment of Invertebrates. Dissections of the different types of the higher forms. Careful notes and drawings are made from these dissections. The use of the Reference Library. The student begins to do research-work in this course.

Opportunity is given to carry on systematic work on the different groups contained in the University Museum.

*[Six hours a week for one term.]*

#### IV.

**Comparative Vertebrate Anatomy**—Lectures and laboratory work. This course consists of a thorough study and classification of types of each of the five classes of vertebrates accompanied by dissections. Special attention is given to Osteology and comparisons are made between the bones of skeletons representing each order of the vertebrates. Opportunities are given for practical work in mounting the skeletons of different animals.

*[Five hours a week for one term.]*

#### V.

**Mammalian Anatomy**—This course has been provided for students preparing themselves for a medical course. The work consists of demonstrations and thorough dissections on the anatomy of the cat.

*[Five hours a week for one term.]*

#### VI.

**Comparative Embryology**—Lectures and laboratory work. A study of the developmental history of invertebrates, including a comparison of the germ-cell and sperm-cell in different types of animals. The maturation and fertilization of the ovum. Mitosis and segmentation. The development of the Ectoderm, Mesoderm, and Endoderm compared in the types of invertebrates, differentiation of tissues, development of the embryo, etc. Special work on the embryology of a vertebrate—Fish.

*[Three hours a week for one term.]*

## COURSES IN GENERAL BIOLOGY.



### I.

**Cytology**—Lectures and laboratory work. History of the cell, cell structure, organization, activity, and mitosis.

*[Two hours a week for one term.]*

### II.

**Elementary Biology**—Lectures and laboratory work. The lower forms of animals and plants compared as to structure, function, and relationship of parts. Animal and plant dissection. Biogenesis and Abiogenesis, Homogenesis and Heterogenesis. The alternation of generation in different forms of animals and plants worked out. The theories of evolution are discussed in this course. Text-book, *Parker*.

*[Five hours a week for one term.]*



## COURSES IN PHARMACY.



### I.

**Elements of Pharmacy**—Lectures, recitations and demonstrations, on the "Art and Science of Pharmacy," embracing its history, review of the important Pharmacopœias, Dispensatories, and Formularies; their values compared and discussed. A course follows for the remainder of the year, on the principles and the various processes governing the

practice of Pharmacy. Text-book, Coblenz's *Handbook of Pharmacy*.

[*Four hours a week for one year.*]

## II.

**Galenical Pharmacy**—A Laboratory Course to accompany Course I. This includes the practical application of Pharmaceutical processes to the manufacture of official preparations of the U. S. Pharmacopœa. Text-book, *U. S. Pharmacopœa*.

[*Five hours a week, the first year.*]

## III.

**General Pharmaceutical Chemistry**—In this course, the Chemical bases and their compounds are considered, with special reference to their importance in Pharmacy and Materia Medica. Text-book, Sadtlers' and Trimble's *Pharmaceutical Chemistry*.

[*Three hours a week, the second year.*]

## IV.

**Laboratory of Inorganic Pharmacy**—In the second year there is a thorough course in the preparation of Pharmaceutical and Technical Chemicals. This course is supplemented by a series of lectures on the selected methods. Text-book, Oldberg's *Manual of Inorganic Preparations*.

[*Three hours a week, for six months.*]

## V.

**General Pharmacy**—A systematic classification of organic and inorganic drugs, from the pharmaceutical stand-point, followed by a close study of each of the classes. Text-book, Coblenz's, *Handbook of Pharmacy*.

[*Two hours a week for two terms.*]

## VI.

**Magistral Pharmacy**—Includes the manifold methods of Dispensing-Pharmacy, with special consideration of incompatibility, posology, and the principles of Elegant Pharmacy. Text-book, Scovilles' *The Art of Dispensing*.

[Two hours a week for two terms.]

## VII.

(1) **Materia Medica, Pharmacognosy and Therapeutics**—A detailed consideration of medicinal substances; their origin and composition.

(2) **Therapeutics**—The action of each drug will be considered according to its grouping.

(3) **Pharmacognosy**—Includes the identification of each drug according to its physical properties, with special reference to its quality. Text-books: (1) Sayres' or Culbreth's *Materia Medica*. (2) Farquarson's *Therapeutics*. (3) Rusby and Jeiliff's *Essentials of Pharmacognosy*.

[Two hours a week for two years.]

## VIII.

**Pharmaceutical Analysis**—Includes Pharmaceutical Assaying, Pharmacopœial Limitations, Alkaloidal Analysis, Bacteriological, Micro-chemical, Polariscope and Spectroscopic Estimations, Technical Analysis of Compounds used in the arts, Toxicology, Urinalysis, Food Analysis and Forensic Pharmacy.

## COURSES IN MICROSCOPY.



### I.

**Microscopy**—Lectures and laboratory work. Refraction and dispersion of light and illumination. The index of refraction in different media. Different shapes of lenses. Spherical and chromatic aberration. The selection and care of a good microscope. The use of accessories for advanced work: immersion and adjustable objectives, camera lucida, sub-stage condenser, polarizer, micrometers, etc. Special work in photo-micrography.

*[Three hours a week for one term.]*

### II.

**Micro-Chemistry**—Laboratory work. The preparation of micro-chemical reagents and their application in testing, fixing, hardening, staining, clearing, and mounting tissues and organs.

*[One hour a week for one term.]*



## COURSES IN HUMAN ANATOMY.



### I.

**Elementary Human Histology**—Laboratory work and demonstrations. Introductory work on the manipulation of the microscope. Prepared tissues of the organs of the human body given to each student, and their structure demonstrated.

*[Two hours a week for one term.]*

### II.

**Advanced Human Histology**—Lectures, recitations and laboratory work. Methods of hardening, staining, embedding, section cutting and mounting of animal tissues. Careful work on the nervous system—brain and spinal cord, termination of nerve fibres, etc. Drawings made from each preparation. Text-book, *Schäfer*.

*[Three hours a week for one term.]*

### III.

**Human Anatomy**—Lectures and recitations. Osteology and descriptive anatomy of the muscular, digestive, circulatory and nervous systems.

*[Two hours a week for four terms.]*

## COURSES IN HUMAN PHYSIOLOGY.



## I.

**Elementary Physiology**—Lectures, recitations and demonstrations with the stereopticon. The study of the human skeleton including the physiology and hygiene of the bones. The action, relation, structure and hygiene of muscles. The digestive, circulatory and excretory systems demonstrated by models and charts. The anatomy and structure of the nervous system and simple experiments on the same. Text-book, *Martin*.

[*Five hours a week for one term.*]

## II.

**Advanced Physiology**—Lectures, recitations and experimental work. A more extended treatment of Course I. on alimentation, deglutition, stomach and intestinal digestion, action of bile and pancreatic juice, absorption, properties of lymph and chyle, secretion, excretion, animal heat and its sources. The physiological divisions and structure of the nervous system. Motor and sensory nerves. Physiological anatomy of the spinal cord. General arrangement and function of the sympathetic system, etc.

[*Two hours a week for two terms.*]

## III.

**Hygiene**—Lectures on personal, domestic and municipal hygiene.

[*One hour a week for one term.*]

## COURSE IN BACTERIOLOGY.



## I.

**Lectures and Laboratory Work**—Lectures on the form, classification, structure and reproduction of bacteria. The relations of bacteria to disease, etc. The principles of sterilization are pointed out. Isolation and identification of pathogenic germs form a large part of the work. Emphasis given to the detection of pathogenic germs by the various staining processes. The early part of the laboratory work is occupied in the preparation of the various culture-media and the growth of certain non-pathogenic forms on these media. Inoculations of animals with pathogenic germs and effects observed. Text-book, *Abbott*.

[*Three hours a week for one term.*]

## COURSES IN GEOLOGY.



### I.

**Elementary Mineralogy**—Lectures, recitations, and laboratory work. A study of crystallography and the classification of minerals, accompanied by practice in the laboratory and museum in the determination of minerals, especially the ores. Blow-pipe analysis. *Collins.*

[*Two hours a week for one term.*]

### II.

**Assaying**—Chiefly laboratory work. Furnace assaying of the ores of gold, silver and lead. *Ricketts.*

[*Two laboratory hours a week for one term.*]

### III.

**Geology**—Lectures and recitations. The study of the general features of the earth. The material composing the accessible parts of the earth. The arrangement of the material in rocks. The causes of geological changes. The history of the earth and the various forms of life that existed in the different periods of successive geological ages. Text-book, *Dana.*

[*Five hours a week for one term.*]

## COURSES IN MUSIC.



## FIRST YEAR.

## I.

**Violin**—Studies by Wichtl, Ries, Mazas, Kreutzer, Fiorillo. Compositions by Dancla, DeBeriot, Sitt.

## II.

**Pianoforte**—Kœhler's and Damm's *Piano School*. Studies by Lœschhorn, Berens, Czerny, Heller. Sonatinas and easy sonatas by Clementi, Haydn, Reinecke and Mozart. *Jugendalbum* and *Kinderscenen* by Schumann.

## III.

**Voice**—Scales and exercises. Studies by Sieber, Concone and Garcia. English songs.

## IV.

**Organ**—Rink's *Organ School*. Eugene Thayer's *Studies, Light Preludes and Fugues* by Bach.

## SECOND YEAR.

## Ia.

**Violin**—Studies by Rode, Schradieck, Dont. Sonatas and pieces by Tartini, Bach, Beethoven and Mozart.

## IIa.

**Pianoforte**—Studies by Czerny, Heller, Hasert, Lecouppy, Cramer and Krause. Octave Studies by Turner. Bach's Preludes, Fugues and Inventions. Sonatas and pieces by Mozart, Haydn, Beethoven, Mendelssohn, Schumann and Schubert.

## IIIa.

**Voice**—Vocalises and studies by Vaccai, Sieber and Cirillo. Standard English, French and German songs.

## IVa.

**Organ**—Schneider-Warren's *Pedal Studies*. Easy sonatas by Mendelssohn, Merkel, Rheinberger. Preludes and Fugues by Bach. *Twenty Studies* by Whiting. *Canonic Studies* by Chadwick.

## V.

**Harmony**—Construction and use of chords. Harmonization of melodies. Harmonizing from figured bass. Text-books: Goetchius' *Tone Relations*, Chadwick's *Harmony*.

## THIRD YEAR.

## Ib.

**Violin**—Sonatas by Bach. Studies by Schradieck-Alard, Wieniawski. Concertos and pieces by Spohr, Vieuxtemps, Mendelssohn, Dvorak.

## IIb.

**Pianoforte**—*Gradus ad Parnassum*, Clementi-Tausig. *Wohl Temperierte Klavier* by Bach. English and French Suites by Bach. *Etudes* by Harberbier and Henselt. Sonatas, concertos and pieces by Beethoven, Weber, Mendelssohn, Chopin, Schubert and Grieg.

## IIIb.

**Voice**—Advanced exercises. Studies in coloratura singing. Selections from Masses and Oratorios by Bach, Mozart, Haydn. Standard modern and classic songs.

## IVb.

**Organ**—Sonatas, Preludes and *Chorale Vorspiele* by Bach. Concert pieces by Hændel, Merkel, Salome, Whiting, Best, Rheinberger.

## Va.

**Harmony**—(Counterpoint.) Simple two and four part counterpoint; double and florid counterpoint. Canon. Fugue.

## FOURTH YEAR.

## Ic.

**Violin**—Studies by Paganini. Concertos and pieces by Beethoven, Brahms, Bruch, Joachim and others.

## IIc.

**Pianoforte**—Studies by Tausig and Chopin. Sonatas, concertos, and concert pieces by Schumann, Brahms, Rubinstein, Liszt.

## IIIc.

**Voice**—Study of recitatives and arias from the oratorios and operas of Hændel, Haydn, Gounod, Meyerbeer, Wagner, Massenet and others.

## IVc.

**Organ**—The greater Preludes, Fantasies and Fugues of Bach. Sonatas and concert pieces by Thiele, Widor, Dubois, Guilmant and Saint-Säens.

## Vb.

**Harmony**—(Composition). Construction of musical forms, i. e., the Sonata, Rondo, etc. Practical application in an original manner of these forms. Orchestration.



Instruction is also given on the Viola, Flute, Piccolo, Cornet, Trombone, Guitar and Mandolin.

Opportunity is given to the advanced students of playing in the University Orchestra and Band, and of singing in the Orpheus Society and the University Choir.



## EVIDENCES OF CHRISTIANITY.



All Catholic students are obliged to attend the Courses in Evidences of Christianity.

The text-book used in the Junior and Senior years is *Hand-Book of the Christian Religion*, by Wilmers.

A two-year course in Deharbe's *Middle Catechism* precedes the course above.

In the Preparatory School Bible History and the Baltimore Catechism are used.

## REGULATIONS GOVERNING ADMISSION TO THE COLLEGIATE COURSES.



Examinations in all the subjects required for admission to the University are held at Notre Dame in September, at the beginning of the Fall term.

Certificates of work done in public or private schools will not be accepted instead of examinations, unless the applicant has passed the final examination after a full course in his school, and the University Faculty are satisfied with the standing of the school.

*No school certificate will be accepted in place of the entrance examination in English, or History, or instead of the Preparatory Mathematics of the Engineering and Science Courses.*

Applicants for advanced standing that present certificates from other colleges or universities may be received at the discretion of the Faculty with or without examination as regards particular cases.

No student will be received as a candidate for the degree of Bachelor after the beginning of the Senior year unless he passes an examination in the Metaphysics and Ethics already studied by the Senior class of the University.

*No student will be admitted to any course of the Senior year until all conditions have been cancelled.*

Catholic Students that are candidates for any degree are required to take the prescribed Courses in Evidences of Religion.

## CONDITIONAL ADMISSION TO FRESHMAN CLASSES.

A candidate failing to pass satisfactory examinations in one or more of the subjects required for admission to any Collegiate Course may, at the discretion of the Faculty, be admitted to his class conditionally, to make up his deficiency by extra study *within one school year*. Only when the conditions are removed will the student be admitted to full standing in his class.

## ADMISSION TO ADVANCED STANDING.

Candidates for admission to advanced classes in any course are required to pass, *in addition* to the usual entrance examinations, an examination in the work already done by the classes they desire to enter. The additional subjects may be found in the programme of courses.

I. School of Arts and Letters.

II. School of Science.

III. School of Engineering.

IV. School of Law.

# SCHOOL OF ARTS AND LETTERS.



## PRIMARY ENTRANCE EXAMINATIONS.

**English**—Part of the examination time is given for answering questions upon books marked *Group A* below, the remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

**Latin**—Grammar, complete; Cæsar: four books of the Gallic War; Cicero: four orations against Catiline; Virgil: *Bucolics*, *Georgics*; Ovid: about 1,200 verses; translation at sight of passages from Cicero and Cæsar; translation of English into Latin based on the text of the author.

**Greek**—(*For Classical Students only.*) Grammar, Etymology, and general rules of Syntax; Xenophon: *Anabasis*, four books; prose composition based on text.

**History**—(a) United States—as set out in Johnson's *History of the United States*, or an equivalent.

(b) A general knowledge of the outlines of Greek and Roman History and of Mediæval and Modern History, as set out in the texts used in the high schools and academies of the country.

**Algebra**—The whole subject as far as logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises of other authors.

**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**Physiology**—Martin's *Human Body*, or an equivalent.

**Chemistry**—Elements of inorganic chemistry, as given in high schools of good standing.

**Physics**—Elementary. The preparation on this subject should include a course of lectures, illustrated by experiments, and recitations from a text-book similar to *Carhart and Chute's* or *Gage's*. Laboratory work is desired, but it is not required.

**Graduation Thesis**—A graduation thesis is required from each student in the Classical and English Courses. This thesis is to be handed in before May.

# Studies Prescribed in the Classical Course.

(DEGREE: A. B.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Latin, . . .	5	35	I.	Latin, . . .	5	35	II.
Greek, . . .	5	31	I.	Greek, . . .	5	31	II.
English, . . .	4	38	I.	English, . . .	4	38	I.
History, . . .	3	42	I.	History, . . .	3	42	I.
Elocution, . . .	2	42	VIII.	Elocution, . . .	2	42	VIII.
Elective, . . .	5			Elective, . . .	5		

## SOPHOMORE YEAR.

Latin, . . .	5	35	III.	Latin, . . .	5	36	IV.
Greek, . . .	5	31	III.	Greek, . . .	5	32	IV.
English, . . .	4	38	II.	English, . . .	4	38	II.
History, . . .	3	42	II.	History, . . .	3	42	II.
Elocution, . . .	2	42	VIII.	Elocution, . . .	2	42	VIII.
Elective, . . .	5			Philosophy, . . .	5	27	I.

## JUNIOR YEAR.

Latin, . . .	5	36	V.	Latin, . . .	5	36	VI.
Greek, . . .	5	32	V.	Greek, . . .	5	32	VI.
English, . . .	4	39	III.	English, . . .	4	39	III.
Philosophy, . . .	5	27	II.	Philosophy, . . .	5	27	II.
Elocution, . . .	2	42	VIII.	Elocution, . . .	2	42	VIII.
Political Economy, . . .	4	44	I.	Elective, . . .	5		

## SENIOR YEAR.

Latin, . . .	5	37	VII.	Latin, . . .	5	37	VIII.
Greek, . . .	5	33	VII.	Greek, . . .	5	34	VIII.
English, . . .	4	39	IV.	English, . . .	4	39	IV.
Philosophy, . . .	7	29	III.	Philosophy, . . .	7	29	IV.
Elocution, . . .	2	42	VIII.	Elocution, . . .	2	42	VIII.



## Studies Prescribed in the English Course.

(DEGREE: Litt. B.)

### FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
English, . . .	4	38	I.	English, . . .	4	38	I.
Latin, . . .	5	35	I.	Latin, . . .	5	35	II.
French or . . .	5	45	I.	French or . . .	5	45	I.
German, . . .		47	I.	German, . . .		47	I.
History, . . .	3	42	I.	History, . . .	3	42	I.
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.
Elective, . . .	5			Elective, . . .	5		

### SOPHOMORE YEAR.

English, . . .	4	38	II.	English, . . .	4	38	II.
Latin, . . .	5	35	III.	Latin, . . .	5	36	IV.
French, . . .	2	46	II.	French, . . .	2	46	II.
German, . . .	3	47	II.	German, . . .	3	47	II.
History, . . .	3	42	II.	History, . . .	3	42	II.
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.
Elective, . . .	5			Philosophy, . .	5	27	I.

### JUNIOR YEAR.

English, . . .	4	39	III.	English, . . .	4	39	III.
Latin, . . .	5	36	V.	Latin, . . .	5	36	VI.
Philosophy, . .	5	27	II.	Philosophy, . .	5	27	II.
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.
History, . . .	4	43	III.	History, . . .	4	43	III.
Elective, . . .	5			Elective, . . .	5		

### SENIOR YEAR.

English, . . .	4	39	IV.	English, . . .	4	39	IV.
Latin, . . .	4	37	VII.	Latin, . . .	4	37	VIII.
Philosophy, . .	7	29	III.	Philosophy, . .	7	29	IV.
Economics, . .	4	44	I.	History, . . .	5	43	IV.
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.

# Course in History and Economics.

(DEGREE: Litt. B.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
History, . .	4	42	I.	History, . .	4	42	I.
English, . .	4	38	I.	English, . .	4	38	I.
French, . .	5	45	I.	French, . .	5	45	I.
Spanish, . .	5	46	I.	Spanish, . .	5	46	I.
Elective, . .	3			Elective, . .	3		
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.

## SOPHOMORE YEAR.

History, . .	4	42	II.a IV.a	History, . .	4	42	II.a IV.a
Political Sci'ce,	4	44	I.	Political Sci'ce	3	44	II.
English, . .	4	38	II.	Philosophy, . .	5	27	I.
German, . .	5	47	II.	English, . .	4	38	II.
French, . .	2	46	II.	German, . .	5	47	II.
				French, . .	2	46	II.
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.

## JUNIOR YEAR.

History, . .	7	43	II.b III.	History, . .	7	43	II.b III.
Political Sci'ce,	3	44	II.	Political Sci'ce,	3	44	III.
Philosophy, . .	5	27	II.	Philosophy, . .	5	28	III.
English, . .	4	39	III.	English, . .	4	39	III.
German, . .	2	47	III.	German, . .	2	47	III.
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.

## SENIOR YEAR.

History, . .	3	43	IV. b	History, . .	3	43	IV. b
Political Sci'ce,	7	44	IV. v. VII.	Political Sci'ce,	6	45	VI. VII. VIII.
Philosophy, . .	5	29	IV.	Philosophy, . .	5	29	IV.
English, . .	4	39	IV.	English, . .	4	39	IV.
Elocution, . .	2	42	VIII.	Elocution, . .	2	42	VIII.

## COURSE IN JOURNALISM.

(DEGREE: Master of Letters in Journalism.)



This is strictly a post-graduate course and is open only to those who have completed the Course in History and Economics described on page 98. The purely academic training afforded by that Course is here supplemented by a year's practical experience in newspaper work under the immediate supervision of an experienced journalist. Abundant opportunity for practice is offered by the newspapers of Chicago (all of which have regular correspondents at the University) and of other large cities. In addition to the routine work of this Course, each student is expected to contribute to special departments in newspapers and magazines, and diplomas will not be issued to those who have failed to find a market for at least some of their work. The classes in this Course are:

**Journalism**—Lectures and recitations on the history of journalism. Critical comparative study of home and foreign newspapers. The law of newspaper libel. Copyright and postal regulations. Daily exercises in reporting, and frequent exercises in editorial writing; department work; musical and dramatic criticism and book reviews. Editing copy, proof-reading and "making-up" a newspaper. Lectures on topics of current interest, and exercises in the treatment of them. Required readings in Dana's *Art of Newspaper Making*, Shuman's *Steps into Journalism*, Hudson's *History of Journalism*, Luse's *Writing for the Press*, any good treatise on the law of libel and slander, and the biographies of famous journalists. Discussion of the business side of newspaper work, advertising, circulation, etc.

**Theology**—Wilhelm and Scannell's *Manual of Dogmatic Theology*.

**Phonography and Typewriting**—Ordinary Course.  
**Political History of the 19th Century.**

## SCHOOL OF SCIENCE.



Two courses are given, one a course in General Science, the other a course in Biology.

### REQUIREMENTS FOR ADMISSION.

Candidates for the Freshman class of either of these courses must be prepared to pass an examination in Arithmetic, included in English examinations, and Geography, unless satisfactory assurance of their proficiency in these branches is given. In addition, they must pass an examination in the following subjects:

**History**—(a) United States,  
(b) General outlines. See page 94.

**Algebra**—The whole subject as far as logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises of other authors.

**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**Chemistry**—A course of at least fifty experiments in elementary chemistry actually performed by the pupil.

**French or German**—Ability to translate at sight easy French or German into English, and easy English sentences into French or German. In the courses in Biology and General Science French and German are required.

**English**—Part of the examination time is given for answering questions upon books marked *Group A*, the

remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

**Latin**—Grammar, complete; Cæsar: four books of the Gallic War; translation of English into Latin based on the text of this author.



## Introduction to the Course in General Science.



The Course in General Science is calculated to afford such an acquaintance with the methods and facts of modern science as will best enable the student to fit himself, either for further study of a technical or professional kind, or for the activities of business life. The Natural and Physical Sciences constitute the primary studies of this Course. Grouped about these are those studies in English, Mathematics, and the Modern Languages, which experience has shown to be necessary for the intelligent pursuit of science and for the attainment of the object of the Course.

Two essays on scientific topics are required of every student during the Sophomore Year and two during the Junior Year.

The scientific work of the Senior Year is elective. Advanced courses may be chosen in Physics, Chemistry, Biology, or Mathematics.

Every candidate for a degree in the Course of General Science is required to submit, at least six weeks before the final examinations, a written thesis upon some subject connected with the elective work of the Senior Year. The subject chosen must have the approval of the Professor in the course elected. The Thesis shall contain not less than six thousand words, and must be satisfactory in matter and treatment.

Students that complete the required courses, pass the final examinations, and present a satisfactory thesis will receive the degree of Bachelor of Science.

(The facilities for instruction in this Course are described on page 16.)  
For Laboratory Fees, see page 110.

## Studies Prescribed in the Course in General Science.

(DEGREE: B. S.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Physiology, . .	5	84	I.	Zoology, . .	6	77	I. II.
Physics, . .	5	74	I.	Chemistry, . .	4	72	I.
Chemistry, . .	4	72	I.	Trigonometry, . .	5	48	II.
Anatomy, . .	2	83	I.	English, . .	5	38	I.
Algebra, . .	5	48	I.	French or Ger., . .	2	45 47	I.
English, . .	5	38	I.	Drawing, . .	2	69	II.
French or Ger., . .	2	45 47	I.				
Drawing, . .	2	69	I.				

## SOPHOMORE YEAR.

Botany, . . .	5	76	I.	Botany, . .	6	76	I. II.
Chemistry, . .	5	72	II.	Physics, . .	4	74	II. III.
French or Ger., . .	2	45 47	II.	Anal. Geometry . .	5	49	III.
Physics, . .	3	74	II.	French or Ger., . .	2	45 47	II.
English, . .	1	40	V.	Drawing, . .	2	69	II.
Elective, . .	3			English, . .	1	40	V.
Drawing, . .	2	69	II.	Elective, . .	3		

## JUNIOR YEAR.

Geology, . .	2	86	I.	Geology, . .	7	86	II. III.
Calculus, . .	5	49	IV.	Calculus, . .	5	50	V.
Astronomy, . .	3	58	I.	Astronomy, . .	3	58	I.
English, . .	1	40	V.	Philosophy, . .	5	27	I.
Two Electives, . .	5			English, . .	1	40	V.
				One Elective, . .	3		

## SENIOR YEAR.

Three Electives in Science, . .	9-15			Three Electives in Science, . .	9-15		
Philosophy, . .	5	27	II.	Philosophy, . .	5	27	II.
French or Ger., . .				French or Ger., . .			
Scientific Readings, . .	1			Scientific Readings, . .	1		



## Introduction to the Course in Biology.



The Course in Biology has been designed for students that wish to devote their time largely to biological pursuits, either as an immediate preparation for the study of medicine or veterinary science, or with a view to teaching or otherwise engaging in biological research. The students in this Course are required to prepare an essay during the first term of the Junior Year on some subject pertaining to biology. Every candidate for a degree must submit a written thesis accompanied with original drawings. This thesis must be presented two weeks before the final examinations. Students not preparing themselves for a medical course may substitute for the advanced Courses in Anatomy and Physiology equivalents from either Mathematics, Physics, or English Literature.

### LABORATORY FEES.

Biological Laboratory— <i>Biology II.</i> —2nd session, . . . .	\$5.00.
Biological Laboratory— <i>Zoology II.</i> —2nd session, . . . .	2.50.
Use of Apparatus in Biological Laboratory, . . . . .	5.00.
Botanical Laboratory— <i>II.</i> —2nd session, . . . . .	5.00.
Use of Apparatus in Botanical Laboratory, . . . . .	5.00.
Bacteriological Laboratory— <i>I.</i> —1st session, . . . . .	10.00.
Use of Apparatus in Mineralogical Laboratory, . . . . .	5.00.

(The facilities for instruction in this Course are described on page 16.)

## Studies Prescribed in the Course in Biology.

(DEGREE: B. S.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION	
		Page	Course			Page	Course
Physiology, . .	5	84	I.	Zoology, . .	6	77	I. II.
Physics, . .	5	74	I.	Chemistry, . .	4	72	I.
Chemistry, . .	4	72	I.	English, . .	5	38	I.
Anatomy, . .	2	83	I.	French or	2	44	I. III.
English, . .	5	38	I.	German, . .	2	47	I. III.
French or	2	44	I. III.	Drawing, . .	2	71	VIII.
German, . .	2	47	I. III.				
Drawing, . .	2	71	VIII.				

## SOPHOMORE YEAR.

Botany, . . .	5	76	I.	Botany, . . .	6	76	I. II.
Gen'l Biology,	2	79	I.	Gen'l Biology,	5	79	II.
Microscopy, .	3	82	I.	Microscopy, .	1	82	II.
Chemistry, . .	5	72	II.	Chemistry, . .	7	73	IV.
French or	2	46	II.	French or	2	46	II.
German, . .	2	47	II.	German, . .	2	47	II.
Drawing, . .	2	71	IX.	Drawing, . .	2	71	IX.
English, . .	1	40	V	English, . .	1	40	V.

## JUNIOR YEAR.

Human				Human			
Anatomy, . .	2	83	III.	Anatomy, . .	2	83	III.
Zoology, . .	6	77	III.	Zoology, . .	10	78	IV. V.
Bacteriology, .	3	85	I.	Chemistry, . .	5	73	III.
Geology, . .	2	86	I.	Geology, . .	5	86	III.
English, . .				Philosophy, . .	5	27	I.
	1	40	V.	English, . .	1	40	V.

## SENIOR YEAR.

Human				Human			
Anatomy, . .	5	83	II. III.	Anatomy, . .	2	83	III.
Human				Human			
Physiology, .	4	84	II. III.	Physiology, .	3	84	II.
Botany, . .	10	76	III.	Botany, . .	10	76	III.
Philosophy, .	5	27	II.	Zoology, . .	3	78	IV.
				Philosophy, .	5	27	II.

## COURSES IN PHARMACY.



There are two courses in Pharmacy: one of two years, leading to the degree, *Graduate in Pharmacy* (*Ph. G.*); and another of three years, leading to the degree, *Pharmaceutical Chemist* (*Phar. C.*) The courses in the first two years of the three-year course are the same as those required for the degree, *G. Phar.*

### ADMISSION.

Candidates for admission to these courses must be at least 17 years of age.

The requirements for admission are the same as those prescribed on pages 100 and 101, with the exception that French and German are excluded.

Experience in a drug-store will not be accepted instead of the entrance examinations, but it will be of great advantage to the student in the work of this Course.

### METHODS AND EQUIPMENT.

The subjects studied in this department are intended to impart a thorough theoretical as well as a practical knowledge of Pharmacy, the work commencing with the simplest and gradually leading up to the most difficult and complicated processes.

Especial attention is given to the little details, often neglected in schools, which are so essential to success in any professional work and particularly in Pharmacy. The student is carefully drilled in store etiquette, business hints, prescription work, and dispensing. Neatness and order in all the operations and extreme care in the manufacture of preparations are required throughout the Course.

On entering the laboratory the student is assigned to a

desk fully equipped with all the necessary apparatus. He has at hand balances, percolators, mortars, graduated glasses, hydrometers, thermometers, pill machines, Liebig condensers, stills, a large assortment of porcelain, platinum and glass utensils, sand and steam baths and other minor articles that are included in a complete laboratory outfit.

### THESIS.

During the last year the student is required to spend at least two hours a week in original research on a subject within the domain of Pharmacy. The results of this work are carefully recorded and must be typewritten and presented to the faculty as a requirement for graduation.

### LABORATORY FEES.

In addition to the regular tuition-fee covering cost of board, room, etc., the student is required to pay:

Pharmaceutical Laboratory II. ....	\$20.00.
Pharmaceutical Laboratory II. and IV. ....	20.00.
Pharmaceutical Laboratory VII. and VIII.....	40.00.

## COURSES IN PHARMACY.

(DEGREES: Ph. G., Ph. C.)

## FIRST YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Materia Medica,	2	81	VII. 1	Materia Medica	2	81	VII. 1
Pharmacy, .	4	79	I.	Pharmacy, .	4	79	I. II.
Chemistry, .	2	72	I. a	Chemistry, .	2	72	I. b
Botany, . . .	5	76	I.	Botany, . . .	5	76	I.
English, . . .	5	38	I.	English, . . .	5	38	I.
				Physics, . . .	5	74	I.

## SECOND YEAR.

Pharmacy, . .	6	80	II. III. V.	Pharmacy, .	6	80	II. IV. VI.
Chemistry, .	5	72	II.	Chemistry, .	5	73	III.
Materia Medica,	5	81	VII.	Materia Medica	5	81	VII. 2
Pharmacognosy	2	81	VII. 3	Physiology, .	5	84	I.

## THIRD YEAR.

Pharmacy, . .	5	80	VI.	Pharmacy, .	5	80	VIII.
Chemistry, .	7	73	IV.	Therapeutics,	2	81	VII. 2
Bacteriology, .	3	85	I.	Toxicology, .	5	73	V.
Minerology, .	2	86	I.	Minerology, .	2	86	II.
Thesis, . . .							

Apply for a detailed catalogue (free) of the Pharmacy College.

## SCHOOL OF ENGINEERING.



Three regular courses are offered: one leading to the degree of Civil Engineer, one to the degree of Mechanical Engineer, and another to the degree of Mechanical Engineer in Electrical Engineering.

A special Short Course in Electrical Engineering is offered to accommodate those that wish to fit themselves for practical work in the shortest possible time.

A student should not take up any one of these courses unless he has a natural aptitude for mathematics. A liking for machinery and tools is of great advantage in Mechanical or Electrical Engineering.

Special attention is given to the practical work of Engineering in the laboratories and draughting rooms. The exercises in calculating, designing and constructing are made to conform as nearly as possible to the best modern engineering practice.

The various laboratories are equipped with the most approved forms of instruments and appliances and considerable time is given to technical work in the laboratories.

(For a list of available apparatus, see pages 14-15.)



In the schedule of studies one hour credit is given for each recitation or lecture which requires from one to two hours' preparation. Two hours actual time in laboratory work or drawing are required for each hour on the schedule.

## EXPENSES.

In addition to the regular fees for matriculation, board, tuition, lodging, etc., as given on page 24, the regular students in the three Engineering Courses are required to pay laboratory fees to cover, in part, the cost of materials consumed and the deterioration of the apparatus used, as follows:

## LABORATORY FEES.

Physical Laboratory III. ....	\$ 5.00.
Physical Laboratory IV. ....	15.00.
Electrical Laboratory I., II. ....	15.00.
Electrical Laboratory V. ....	20.00.
Shopwork, all four-hour courses, ....	15.00.
Chemistry, I., II., III., IV., VI., VII., each, ....	10.00.
Chemistry, V. ....	5.00.

## ADMISSION.

Candidates for admission to the Freshman Year must be at least 17 years of age. For advanced standing there must be a corresponding increase in the age limit.

## ENTRANCE EXAMINATIONS.

Written examinations in the following subjects required for admission will be held at the University on the first two days of the fall term at the beginning of the school year :

**Arithmetic**—Complete, including the metric system of weights and measures. Special importance is attached to accuracy in calculations and the practical application of rules.

**Algebra**—Fundamental operations, simple equations, involution and evolution, radicals, radical equations and quadratic equations, including everything up to logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises by other authors.



**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**History**—(a) United States,  
(b) General outlines. See page 94.

**Geography**—Political and Physical, as much as is contained in the larger school geographies.

**Physics**—Elementary. The preparation on this subject should include a course of lectures, illustrated by experiments, and recitations from a text-book similar to *Carhart and Chute's*, or *Gage's*. Laboratory work is desirable but it is not required.

**Chemistry**—The elements of inorganic chemistry, as given in good high schools.

**Botany**—(*For Civil Engineering only.*) As given in elementary text-books.

**Physiology and Hygiene**—(*For Civil Engineering only.*) As given in elementary text-books.

**French and German**—(*Only one language is required.*) A knowledge of elementary grammar and an ability to read ordinary prose at sight. This should be acquired by the reading of about three hundred pages of annotated text, including historical narrative and popular science in connection with the study of grammar.

**English**—Part of the examination time is given for answering questions upon books marked *Group A*, the remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

If the applicant passes these examinations satisfactorily he may begin at once the regular Freshman work; but if he is deficient in one or more subjects he may enter conditionally and make up his deficiency as soon as possible in the Preparatory Department.

Those that are prepared to pass the entrance examination in German will take French in the Freshman and Sophomore Years, while if French is presented at the entrance examination German will be studied in the Freshman and Sophomore Years. The intention in either case is to give a reading knowledge of technical works.

## Introduction to the Course in Civil Engineering.



The Courses of instruction are designed to prepare students by a thorough and systematic training in the sciences and in the principles of Civil Engineering, to perform intelligently the duties of their profession either in the office or in some of the responsible positions superintending the construction and operation of public works. To secure these results the student is given, not only a sound theoretical training in the studies of the Courses, but he is also required to study the practical applications of the principles upon which the theory is based. The first two years are devoted to the study of Mathematics and the theoretical branches. The last two years are given to the study of the applied courses, practical work in the laboratory and field, so much as possible, being required throughout the course.

Sufficient instruction is given in French and German to enable the student to read easily and understandingly professional works in these languages; while the study of English is pursued until the student is qualified to prepare acceptable themes on professional subjects. Instruction based upon standard text-books is given throughout the course by means of lectures, recitations, practice in laboratory, drawing room, and field. This work is largely supplemented by assigning to the student, for solution, practical problems bearing directly upon the subject matter discussed in the class room and requiring original investigation, thus training the student to habits of independence and awakening his interest in the work of his course.

The Department is provided with all the instruments necessary for effective work in the different branches of field

Engineering. After the student is taught the use and adjustments of the instruments, surveys, elementary in character, are commenced and continued progressively until the more difficult principles and methods are understood. In a similar manner is instruction given in the Courses, Sanitary Engineering, Hydromechanics, Resistance of Materials, Bridges and Roofs, etc., thus familiarizing the student with practical Engineering subjects, and the most approved methods of execution and designing.

A Thesis on some approved subject connected with the course of study, is required of each student as a condition of graduation. The Thesis must embody the results of original research.

# Studies Prescribed for Civil Engineering.

(DEGREE: C. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	48	I.	Analytic Geom.	5	49	III.
Trigonometry,	5	48	II.	Surveying, .	5	51	II. III.
English, . .	5	38	I.	English, . .	5	38	I.
French or Ger.,	2	45 47	I.	French or Ger.	2	46 47	II.
Chemistry, .	3	72	I.	Chemistry, .	3	72	I.
Drawing, . .	3	69	I.	Drawing, . .	3	69	I.

## SOPHOMORE YEAR.

Calculus, . .	5	49	IV.	Calculus, . .	5	50	V.
Des. Geometry,	3	51	I.	Des. Geometry,	3	51	I.
R. R. Surveying	4	52	VI. VII.	Adv. Surveying	5	52	IV. V.
English, . .	1	40	V.	English, . .	1	40	V.
Physics, . .	3	74	II.	Physics, . .	3	74	II.
Drawing, . .	4	69	II. III.	Drawing, . .	4	70	III. V.
French or Ger.,	2	46 47	III.	French or Ger.	2	46 47	III.

## JUNIOR YEAR.

Analytic Mechanics,	5	53	VIII.	Mechanics of Materials, .	5	53	IX.
Astronomy, .	3	58	I.	Astronomy, .	3	58	I.
Geodesy, . .	4	57	XVIII.	English, . .	1	40	V.
English, . .	1	40	V.	Geology, . .	4	86	III.
Geology, . .	4	86	I.	Stereotomy, .	2	57	XV.
Drawing, . .	4	70	V.	Drawing, . .	2	70	VI.

## SENIOR YEAR.

Engineering, .	5	55	XIV.	Engineering,	5	55	XII.
Drawing, . .	4	70	VI.	Hydromechan.	3	56	XIII.
Bridges, Roofs,	3	54	X.	Graph. Stat.,	5	55	XI.
Sanitary Eng.,	2	55	XV.	Steam Boilers,	3	60	IV.
Hydromechan.,	3	56	XIII.	Thesis Work,			

## Introduction to the Course in Mechanical Engineering.



The Course in Mechanical Engineering, leading to the degree of Mechanical Engineer, is given to those young men that wish to prepare themselves for the designing of machinery, with its appurtenances, and for the successful management of power-plants. As the course requires a thorough knowledge of Pure and Applied Mathematics, as well as of Physics, only those capable of adapting themselves to these requirements should take it up. The course is modeled in the twofold belief that a thorough fundamental training is essential to success in engineering, and that this training is best secured by a study of the practical application of the principles involved, as well as of the theoretical principles.

The work of the department, conducted in connection with other departments elsewhere described, consists of the study, by text-book or lectures, of the materials used in Mechanical Engineering, accompanied by the science of pure mechanical kinematics, which traces the motions of connected parts without reference to the cause of such motions or to the work done or energy transmitted. This is succeeded by machine design, which is a direct development of kinematics, and the course continues throughout the Junior and Senior Years.

The Courses in Shopwork are most complete. The first years' work is confined to practice in the woodshop, in which the principles of carpentry, turning, and pattern-making are taught. When students have become sufficiently

skilled in woodwork, they take up the work of the foundry, blacksmith shop, and machine shop. During the ensuing year the advanced students will undertake the construction, from an original design, of a rotary steam engine. A systematic course of training is provided, which advances the student by easy steps until he has mastered all the details of the art.

The latter part of the Senior Year is largely taken up in the preparation of a Graduating Thesis. Here especially the student is taught to depend as much as possible upon his own resources and abilities in exercising his ingenuity. It is the culminating effort of the Course, embodying the chief results, and is expected to show considerable originality.

(For the equipment of the shops in which the courses are given, see  
Page 18.)



# Studies Prescribed for Mechanical Engineering.

(DEGREE: M. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	48	I.	Anal. Geometry	5	49	III.
Trigonometry,	5	48	II.	English, . .	5	38	I.
English, . .	5	38	I.	French, . .	2	45	I.
French, . .	2	45	I.	German, . .	3	47	II.
German, . .	3	47	II.	Drawing, . .	3	69	II.
Drawing, . .	3	69	I.	Chemistry, .	2	72	I. b
Chemistry, .	3	72	I. a	Shopwork, .	5	62	X. a

## SOPHOMORE YEAR.

Calculus, . .	5	49	IV.	Calculus, . .	5	50	V.
Descriptive Geometry, .	3	51	I.	Des. Geometry,	3	51	I.
Drawing, . .	2	69	II.	Drawing, . .	3	69	II.
English, . .	1	40	V.	English, . .	1	40	V.
French, . .	2	46	II.	French, . .	2	46	II.
Chemistry, .	5	72	II.	Chemistry, .	5	73	III.
Physics, . .	3	74	II.	Physics, . .	4	74	II. III.
Shopwork, .	4	62	X. b	Shopwork, .	4	62	X. c

## JUNIOR YEAR.

Analytical Mechanics, .	5	53	VIII.	Mech's of Eng.	5	53	IX.
Kinematics, .	5	60	V.	Machine design	3	61	VI.
English, . .	1	40	V.	Valve Gears,	2	61	VII.
Drawing, . .	3	70	IV.	Electrical Eng.	2	64	III.
Physics, . .	3	75	IV.	English, . .	1	40	V.
Shopwork, .	5	62	X. d	Drawing, . .	3	70	IV.
				Shopwork, .	5	62	X. e

## SENIOR YEAR.

Materials of Engineering,	5	59	II.	Thermodynam,	5	59	I.
Thermodynam.	5	59	I.	Steam Engine Design, . .	5	60	III.
Steam Engine Design, . .	5	60	III.	Steam Boilers,	3	60	IV.
Mechani'l Lab.	3	61	VIII.	Thesis, . . .	12	62	IX.
Shopwork, .	5	62	X. e		5	27	II.

## Introduction to the Course in Electrical Engineering.



The remarkable development of electrical industries during the past few years has created a demand for men skilled in the theory and practice of Electrical and Mechanical work. The study of the subjects arranged on the following page is intended to give a general education as well as special training in the technical branches involved in the various practical applications of electricity in industrial pursuits.

General theory is given in lectures and by recitations from standard text-books. In the laboratories and shops the operations explained in the class room are performed by the student, in which he acquires some skill in handling tools and instruments, and obtains a working knowledge of the principles involved. Careful records of the work done in the laboratories are kept by the student and are handed in for suggestions and corrections at the end of every week.

(For requirements of admission, degree, etc., see pages 102-103.)

### THESIS.

Each candidate for a degree is required to prepare during the Senior Year an acceptable Thesis embodying the results of an extended original research on an Engineering subject, chosen at the beginning of the year, with the approval of the head of the department. The descriptive part must be typewritten and the drawings carefully made on white cardboard.

# Studies Prescribed for Electrical Engineering.

(DEGREE: E. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	48	I.	Anal. Geometry	5	49	III.
Trigonometry,	5	48	II.	English, . .	5	38	I.
English, . .	5	38	I.	French, . .	2	45	I.
French, . .	2	45	I.	German, . .	3	47	II.
German, . .	3	47	II.	Drawing, . .	3	69	II.
Drawing, . .	3	69	I.	Chemistry, .	2	72	I. b
Chemistry, .	3	72	I. a	Shopwork, .	5	62	X. a

## SOPHOMORE YEAR.

Calculus, . .	5	49	IV.	Calculus, . .	5	50	V.
Descriptive Geometry, .	3	51	I.	Des. Geometry,	3	51	I.
Drawing, . .	2	69	II.	Drawing, . .	3	69	II.
English, . .	1	40	V.	English, . .	1	40	V.
French or Ger.,	2	46 47		French or Ger	2	46 47	
Chemistry, .	5	72	II.	Electricity and			
Physics, . .	3	74	II.	Magnetism,	2	64	III.
Shopwork, .	4	62	X. b	Physics, . .	4	74	II. III.
				Shopwork, .	4	62	X. c

## JUNIOR YEAR.

Analytical Mechanics, .	5	53	VIII.	Mech's of Mat.	5	53	IX.
Kinematics, .	5	60	V.	Machine design	3	61	VI. VII.
English, . .	1	40	V.	English, . .	1	64	III.
Drawing, . .	3	70	IV.	Drawing, . .	3	70	IV.
Physics, . .	3	75	IV.	Physics, . .	3	75	IV.
Shopwork, .	5	62	X. d	Shopwork, .	5	62	X. e

## SENIOR YEAR.

Dynamo Machinery, .	5	64	IV.	Dynamo Machinery, .	5	64	IV.
Thermodynam.	5	59	I.	Thermodynam,	5	59	I.
Electrical Lab.,	5	64	V.	Electrical Lab.	5	64	V.
Drawing, . .	3	65	VI.	Drawing, . .	3	65	VI.
Thesis, . . .				Thesis, . . .			

## Short Course in Applied Electricity.



Students that do not wish to take the languages and higher mathematics required in the regular four-year course should enter this shorter course, which may be completed in two years. It is arranged to give an accurate knowledge of the fundamental theories of electricity and magnetism, as well as a certain amount of skill in handling electrical machinery and appliances. Simple algebra, geometry, trigonometry, and elementary physics and chemistry are included, for they are necessary in order to carry on successfully the practical work of designing, manufacturing, and testing or operating electrical apparatus. Training in this practical work is given in the draughting room, the machine shops, and in the electrical and physical laboratories.

The actual conditions of the commercial application of electricity to the distribution of light and power are learned by testing, repairing, and making additions to the University plant and by visiting the numerous electric plants in the vicinity, accompanied by an instructor.

The study of the principles of mechanical drawing is taken up early in the course and sufficient practice is given to enable the student to make working drawings and to follow them in the construction of apparatus in the shops and laboratories.

Applicants for admission to this Course should be at least seventeen years of age. They should have a fair knowledge of the subjects taught in the common schools, especially arithmetic.

When the required studies have been satisfactorily completed, a certificate stating that fact is issued.

## Studies Prescribed for Short Course in Applied Electricity.

### FIRST YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	158	*	Algebra, . .	5	158	†
Drawing, . .	3	69	I.	Geometry, . .	5	159	
Shopwork, . .	3	62	X. a	Drawing, . .	4	69	II.
Physics, . .	3	7	I.	Shopwork, . .	5	62	X. b
Chemistry, . .	2	159	†	Physics, . .	2	74	I.
Electricity, . .	5	63	I.	Electricity, . .	5	63	I.

### SECOND YEAR.

Trigoncmetry,	5	48	II.	Analytic			
Drawing, . .	3	70	VI.	Geometry, . .	5	49	III.
Shopwork, . .	3	62	X. c	Drawing, . .	3	70	VI.
Electricity, . .	5	63	II.	Shopwork, . .	3	62	X. d
Electrical				Electricity, . .	5	63	II.
Construction,	5	63	II.	Electrical			
				Construction,	5	63	II.

\* Second term, second year.

† First term, third year.

‡ First term, third year.

|| First term, third year.

## COURSE IN ARCHITECTURE.



### ADMISSION.

Candidates for admission to the Freshman Year must be at least 17 years of age. For advanced standing there must be a corresponding increase in the age limit.

### DESCRIPTION OF THE COURSE.

Those subjects that are not taught in the architect's office but which are necessary for an architect are especially insisted upon in this course.

The work is technical and freehand drawing is thorough, and the student is prepared for the expression of his architectural plans.

In construction and practice the courses prescribed for the students in the civil and mechanical engineering schools are followed with special application to architectural requirements. The æsthetic part of the work thus has a practical and exact basis.

The history of architecture is taught by lecture and illustrations.

The material equipment consists of plaster models, engravings and photographs of noted buildings, books on architecture, and the apparatus of the engineering and art schools.

# COURSE IN ARCHITECTURE.

(DEGREE: Bachelor of Science in Architecture.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	48	I.	Analy't Geom.	5	49	III.
Trigonometry,	5	48	II.	English, . .	5	38	I.
English, . .	5	38	I.	French or Ger.	2	45 47	
French or Ger.,	2	45 47		Mech. Draw'g,	2	69	II.
Mech. Drawing	2	69	I.	Artistic Draw'g	5	67	I.c I.d
Artistic Draw'g	5	67	I.a I.b	Chemistry, .	2	72	I.b
Chemistry, .	3	72	I. a	Shopwork, .	5	62	X.a

## SOPHOMORE YEAR.

Calculus, . .	5	49	IV.	Calculus, . .	5	50	V.
Des. Geometry,	3	51	I.	Des. Geometry	3	51	I.
Mech. Drawing	3	69	II. III.	Mech. Drawing	4	69	II. III.
Artistic Draw'g	5	68	II.a	Artistic Draw'g	5	68	II.a
English, . .	1	40	V.	English, . .	1	40	V.
French or Ger.,	2	45 47		French or Ger.	2	45 47	
Physics, . .	3	74	II.	Physics, . .	4	74	II. III.
Shopwork, .	4	62	X. b	Shopwork, .	4	62	X. c
Ap. Electricity,	3	63	I.				

## JUNIOR YEAR.

Analytic Mech.,	5	53	VIII.	Mech. of Mat'ls	5	53	IX.
English, . .	1	40	V.	English, . .	1	40	V.
Geology, . .	4	86	I.	Geology, . .	5	86	III.
Mech. Draw'g *	4	70	VI.	Mech. Draw'g*	4	71	VII.
Artistic Draw'g	5	68	II.b	Artistic Draw'g	5	68	II.b
Roof Trusses,	3	54	X.	Roof Trusses,	3	54	X.

## SENIOR YEAR.

Arch't Design,†	10	65	II.	Arch'l Design†	10	65	II.
Contracts, . .	1	140	I.	Photography,	2	66	VI.
Specifications,	1	65	III.	Stereotomy, .	2	56	XV.
Hist. of Arch'e,	3	65	I.	Hist. of Arch'e	3	65	I.
Surveying, .	5	51	II. III.	Vent. & Heat'g	1	55	XIII.
Foundations, .	1	55	XII.	Graph. Statics,	3	54	XI.
Thesis Work,				Thesis Work,			

\* Pen-and-ink and Water-color rendering are applied in this work.

† In this course is included work done in Course III., page 68.



School of Law.

## FACULTY.



REV. ANDREW MORRISSEY, C. S. C.,  
President of the University.

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WILLIAM HOYNES, LL. D., DEAN,  
International Law, Equity Jurisprudence and Pleadings,  
Common Law Pleadings, Real and Personal  
Property, Evidence, Domestic Relations,  
Contracts, Torts, etc.

HON. LUCIUS HUBBARD, LL. D.,  
Code Pleadings and Practice.

ABRAHAM L. BRICK, LL. M.,  
Criminal Law.

HON. TIMOTHY E. HOWARD, LL. D.,  
Appellate Jurisdiction of Courts of Last Resort.

## SCHOOL OF LAW.



For several years a systematic movement has been in progress under the auspices of the bench and bar of the country to promote the efficiency and welfare of the legal profession, and to make it as learned in fact as it is by repute. The most essential preliminary step to this end, as lawyers generally agree, is to prescribe requirements and examinations more comprehensive and rigorous as a test of qualifications for

### ADMISSION TO THE BAR.

Upon the law departments of universities, or law schools, as they may collectively be called, the profession must mainly depend for co-operation and success in this laudable undertaking. In fact, due acknowledgment of the importance of their services is made as follows in a former report of the Committee on Legal Education of the American Bar Association:

"The benefits which law schools offer are easily suggested, and are of the most superior kind. They afford the student an acquaintance with general principles, difficult if not impossible to be otherwise obtained; they serve to remove difficulties which are inherent in scientific and technical phraseology, and as a necessary consequence they furnish the student with the means for clear conception and accurate and precise expression. They familiarize him with leading cases, and the application of them to discussion. They give him the valuable habit of attention, teach him familiar maxims, and offer him the priceless opportunities which result from contact and generous emulation. They lead him readily to survey the law as a science, and imbue him with the principles of ethics as its true foundation. Disputing, reasoning, reading, and discoursing, become his constant exercises; he improves remarkably as he becomes acquainted with them, and obtains progress otherwise beyond his reach."

According to the late Chief Justice Waite, of the United States Supreme Court, "Law schools are now a necessity." And, in his work entitled "The American Commonwealth," Professor Bryce attributes the progress in learning and professional attainments of American lawyers "to the extraordinary excellence of many of the law schools."

It is probably well that the Professor qualifies his statement by using the word "many," instead of "all," in referring to the work of the law schools of the country, for not a few of them have been derelict and lacking in wholesome zeal to co-operate in elevating the standard of professional learning and ethics. Some of them still permit persons deficient even in the rudiments of a liberal education to become candidates for diplomas. Their attitude in this respect would seem to indicate that a large attendance and substantial revenue are placed paramount in the scale of importance to substantial results in the equipment and training of students. Such of these as manage without further preparation to secure admission to the bar almost necessarily commit gross mistakes in the technical work of the profession, and, in consequence, clients are wronged, judges embarrassed and courts delayed. While it is true that many of them abandon the practice after a precarious experience and turn to pursuits for which they are better qualified, yet the step is attended in some measure with disappointment and humiliation, not to mention the comparative loss of time and means incident to preparing for examination and waiting vainly for success at the bar.

The movement in progress to protect and promote the interests of the legal profession has spread sufficiently of late to become an obstacle to the continuance of these abuses, exceptional though they be. Hereafter such law schools as receive students indiscriminately, without particular regard to their educational standing, maintaining a loose system of

instruction and permitting loose methods of study, must in most States, at any rate, suffer the humiliation incident to the rejection as incompetent of their graduates by the examining boards designated to pass upon the qualifications of applicants for admission to the bar. This movement is salutary in all respects, and law schools that fail to conform to it in the duration and thoroughness of their courses of instruction have no valid claim upon the patronage of students or the confidence of the public.

It is becoming more difficult year by year successfully to meet the requirements and pass the examinations prescribed for admission to the bar, and law schools are bound to take cognizance of the fact and correspondingly broaden and strengthen their courses of instruction. A few years ago it was far less difficult than it is at present to enter the ranks of the profession, and the decided tendency is to make even more exacting the test of qualifications for membership. With this tendency uninterrupted, the profession gives promise of attaining to its coveted ideal in learning, ethics and efficiency.

And here it is in order to refer more particularly to

### THE SYSTEM OF INSTRUCTION

in the Law Department of the University of Notre Dame, although, of course, it is included in general terms in what has been stated regarding the duty of law schools to aid in promoting the laudable aims and general welfare of the legal profession.

Referring briefly to the prevailing methods of instruction in the different law schools, it may be stated that in some of them the text-book system is exclusively followed, and the students read and recite daily an assigned lesson of a given number of pages; in others the lecture system obtains, as in

European universities, and students familiar with phonography may take notes and sufficiently study the same to be able in subsequent examinations to answer questions bearing upon the subjects studied; in a few others, taking as guide a noted Eastern university, case reading is the favored system, and students study books of selected cases treating of different branches of the law, with a view to reciting them in outline or writing a brief digest of the points involved; in certain other schools an effort has been made to combine some of the distinctive features of case reading and text-book work or lecturing, and a mixed system, as it may be called, exists in them. At Notre Dame, however, none of these systems is exclusively followed. And yet the best features of all are comprised in the curriculum here preferred. It is believed, in short, that nowhere in the country is the course in law more comprehensive, thorough and practical than at this University.

Case reading is usually taken up early in September year by year, and continued long enough to enable students to understand, analyze and criticize the cases assigned to them for study and recitation. The difficulties usually encountered by beginners in the work are readily surmounted by the aid of lectures and explanations. In a course of about seventy-five hours students ordinarily become familiar with a number of the leading cases and learn to recognize features of strength or weakness in the opinions of the courts. They learn also to distinguish dicta from the logical sequence of thought in dealing with the proper subjects of judicial determination, and recognize promptly the qualifying or weakening effect of a dissenting opinion, where such is filed by a minority of the judges. Moreover, after familiarizing themselves in that way with cases, they are advised and expected to read the authorities cited daily in class, whether in the text-books, lectures, or quizzes. In the preparation



also of written theses from month to month, comprising on an average about ten pages of legal cap, they must necessarily consult and cite them. In moot-court work likewise they are prompted in their foretaste of forensic contests by a strong emulation to make a careful study of the pertinent portions of text-books and digests and the cases in the reports, and thus they are enabled intelligently to marshal the authorities upon which they depend for success in the maintenance of their respective contentions. In this way it may be possible for them to acquire without conscious loss of time a more accurate and serviceable knowledge of the practical force, effect and merit of the reported opinions than do those who give their time exclusively to the somewhat incoherent and fragmentary system of case reading.

In examinations for admission to the bar the courts of some States require applicants to furnish lists of the text-books studied by them, and such of these applicants as have merely attended lectures or studied cases, instead of reading text-books, encounter danger of being declared ineligible to stand as candidates for examination, even though they might creditably acquit themselves in it. If they undertake to explain how the law may be learned without studying a certain number of text-books, they find the examiners inclined to listen incredulously, if not openly and positively to express doubt or dissent. And if they ask credit for the work done, it is likely to be given so sparingly as to cause disappointment and discouragement. As some of the law students at Notre Dame come from States in which this test is applied in examinations, the use of text-books is deemed advisable, if not necessary. But there are other reasons for using them. It has been found, for example, that so many mistakes are made by the average student in taking notes of lectures that his notes are sometimes unintelligible or misleading, and consequently practically worthless for future



reference. While it is true that this objection might be removed by resorting to the slow, if not tedious, process of dictation, time being thus given the students to commit fully and accurately to writing all the important principles contained in the lectures, yet this method of instruction would manifestly be impracticable under present conditions in a domain so extensive as the law. Moreover, the books used by students become peculiarly available in their subsequent practice. Remembering more or less clearly the contents, they can turn more readily than they could with books they had not studied to the pages that elucidate the questions with which they may afterwards have to deal at the instance of clients. In some law schools lectures have been taken in full by certain students skilled in phonography, and then typewritten and sold at so much a page to other members of the class, but this practice has fallen into disfavor and disuse, having proved to be very unsatisfactory and more costly than the purchase of text-books.

The lecture or dictation system alone may be pronounced antiquated and impracticable for the reasons already stated, but in combination with text-book work, case reading and daily examinations, its great value and practical utility cannot be impugned. At Notre Dame it forms an important factor in the law curriculum. Each subject is fully covered by lectures, text-book work, daily and bi-monthly examinations, monthly theses, the reading of pertinent cases and weekly trials in the moot and other courts of the Law Department.

This course of instruction is comprehensive, thorough, and practical. It is not and cannot be excelled. It may be stated without qualification or reserve that the earnest and industrious student can accomplish twice as much in a given time at Notre Dame as he can in an office or at home. With comparative immunity from the distractions and

temptations of city life, he can give his entire time to study and necessary recreation. In short, he can here study a greater number of hours and do more class-work day by day than probably anywhere else in the entire country.

The authorities of the University, it may be repeated, are sincerely in sympathy with the efforts now making in educational and legal circles to raise to the highest plane practicable

### THE STANDARD OF PROFICIENCY

for graduation in law and admission to the bar. However, they aim to be guided in the matter by the dictates of sound reason. They know that a great number of worthy and capable young men who desire to qualify themselves for the legal profession are prevented by circumstances from completing the studies of a collegiate course before an age that seems to make imperative the obligation of beginning without delay the study of law. Such young men, many of whom may be actively engaged in business, in teaching, in journalistic work, and the like, are almost necessarily driven to the chaotic and discouraging study of the law in offices, if denied indulgent consideration by the institutions of higher learning.

It is conceived to be the duty of a university to do all the good it can to as many as possible, consistently with its curriculum and standing; and to that end it ought to aid and encourage, to the full limit of its opportunities, worthy and upright, honest and capable young men who manifest an earnest desire to qualify themselves for a useful and creditable career in the higher walks of professional life. With a view to doing its full share in this regard, the University of Notre Dame will welcome to its halls and its classes every deserving young man who desires to pursue and become proficient in the study of the law. However, if his standing

in general education or collegiate work be not sufficiently advanced to enable him to undertake with profit the studies of the Junior year in law, he may enter the Elementary class, the members of which are given instruction in the fundamental principles of the law for an hour each day. The remainder of his time is devoted to study and recitation in such of the collegiate courses as, in the opinion of the authorities, may prove most useful and helpful in qualifying him to enter as speedily as practicable upon the studies of the Junior and Senior classes.

A faithful discharge of the duties devolving upon students in these classes will demand their entire time. Every hour of the day can be devoted profitably to the work assigned to them. Even the postgraduate students, who have only law work to do, find that this keeps them very busy. And yet it seems that, in an indulgent spirit, an exception ought to be made in the interest of such students as by previous study in other law schools, or law offices, or actual practice as attorneys, have acquired the right to be credited with work acceptably done or advanced standing in the course. It is deemed only fair and proper to allow such as these to take electively any additional studies they may choose in the regular or special courses of the University. But this option may not be exercised without permission and reasonable assurance that it will not interfere with the work prescribed for students of the Law Department. The rule requiring regularity in class attendance is imperative. Once students enter a class they are expected to remain in it for the session at least, faithfully performing the duties it imposes upon them. They may thus, by coming to Notre Dame to complete their legal studies, materially add to their attainments in any other branches of knowledge likely to be helpful to them in their practice as lawyers.

This fact tends pertinently to illustrate the special advantages to be derived from studying law at a university. There the educational atmosphere is elevating, broadening, exhilarating. It awakens an invigorating spirit of emulation. It encourages the exercise of all the faculties and intellectual powers. It serves as a potent and wholesome force in the development of mind and body. The impressive lesson it inculcates relative to the past, the present and the future—the manifold duties of life—necessarily directs the thoughtful to paths of knowledge and usefulness. It awakens life-directing forces that else would perhaps ever lie dormant. It tends to turn thought and action toward high ideals, aspiring scholarship, sturdy self-reliance and increasing power and influence at the bar.

Students who do not intend to practice law or become candidates for the degree of LL. B., but wish simply to add to their educational acquirements a knowledge of the

#### FUNDAMENTAL PRINCIPLES OF THE LAW

may at any time during the year, with proper permission, have their names enrolled on the list of students in the Elementary class of this Department. No extra expense is thereby entailed. However, such students must be sufficiently advanced in age and education to justify the belief that they can understand and appreciate instruction in the law.

The number of such students is likely to increase steadily, for year by year it is becoming more manifest that an education is not complete without a knowledge of at least the elementary principles of the law. Many a man in trade has had to face financial ruin on account of want of acquaintance with the fundamental legal principles. Although in theory, at least, every person is presumed to know the law, yet many a man has, by an inconsiderate act, due to his ignorance of it, forfeited claim to the protection of the courts and the

vindication of his rights. Many a person has been forced to do exactly the contrary to what he intended through his failure to understand the essential elements of a contract. Many a one has been compelled to pay heavy damages for personal injuries caused by negligence, or failure to perform a duty, or improper performance of it, where no liability would exist if the "law of torts" had been known and observed. As the law is over and around every creature from the first moment of his being until the grave closes upon him and his estate is settled, it would be impossible to overestimate its utility and importance. Indeed, there is no study that can at all compare with it in practical utility, in training the mind to accuracy of observation, and in strengthening the judgment.

A period of three years is prescribed for under-graduates in the

#### COURSE OF STUDY

in the Law Department of this University. It leads when satisfactorily completed to the degree of LL. B. The Post-graduate course comprises an additional or fourth year, and leads to the degree of LL. M. By its charter this University is empowered to confer these and all other degrees appertaining to the courses of study in educational institutions of the highest rank. There is no university that has greater power under the law in this respect. The under-graduate students of the Law Department are divided into three classes, corresponding to each year of the course leading to the degree of LL. B. They are known respectively as the Elementary, Junior and Senior classes. The Postgraduate course is for students who have received that degree and aim at attaining by further study and practical work to a higher order of proficiency. A full year of study in each class is obligatory. Moreover, the students must



pass a satisfactory general examination at the close of each scholastic year. This test is indispensable as a condition of promotion in the Elementary and Junior classes and as evidence of qualifications for graduation in the Senior class. The subjects of study and the work to be done in each class may briefly be outlined :

### ELEMENTARY CLASS—FIRST YEAR.

An hour daily is given to instruction, recitation and work in the class-room during the first year. The class-room, commodious and well-appointed, is in the main building. The regular course of instruction consists in text-book work, lectures, quizzes, written exercises and attendance weekly at moot-court trials and society meetings. The books primarily used are *Blackstone's and Kent's Commentaries*. Such other works on elementary law are also used as, from time to time, seem best adapted and most available for purposes of instruction. Of these mention may be made of *Walker's American Law*, *Smith's Elementary Law*, *Munson's Elementary Practice*, *Keener's Selections on Jurisprudence*, *Holland's Elements of Jurisprudence*, *Fishback's Manual of Elementary Law*, and the like. Such of these as may seem most available for class purposes at any particular time may be studied in addition to the books primarily used. The recently published edition of *Blackstone's Commentaries*, by Dr. William Draper Lewis, is justly regarded as the best and most complete known to the profession, although the chart feature of *Blickenderfer's Abridgment of Blackstone* is much appreciated by students. *Browne's Blackstone*, too, is a carefully prepared summary in one volume of the essential elements of the original work. *Browne's Edition of Kent's Commentaries* is also a useful summary in one volume of the original treatise. However, it is usually safer for students to purchase their books after

joining the class, for uniformity is thus assured, as well as a reduction in price. This suggestion applies not only to the Elementary, but also to the other classes.

Persons who desire to become members of this class must be at least eighteen years of age and entitled to collegiate standing in their general education. However, ample opportunity is afforded them to pursue such additional studies as may seem useful in preparing them for a successful career in the law. For example, a knowledge of Latin, Logic, History, Belles-Lettres, Political Economy, and the like, would be very helpful to them. Other subjects also, in which they may either regard themselves as deficient or wish to excel, may likewise be entered on their lists of studies. Should it be deemed necessary or advisable for them to perfect themselves in these studies, whether one year or several years be requisite, it would be entirely practicable meanwhile to attend the exercises of the Elementary class. Work thus done would necessarily serve to broaden and deepen the foundation of subsequent work in the Junior and Senior years, making it peculiarly effective and promising. The work done in this class is exceptionally instructive and interesting for beginners, and there is sufficient change in it annually to sustain interest and make attendance profitable, though continued for two or more years.

### JUNIOR CLASS—SECOND YEAR.

When a student enters this class his close attention, and earnest thoughts, and best efforts must be directed exclusively, with seldom an exception, to the study of the law. He must attend class exercises at least three hours daily. This he must do for the entire scholastic year. Otherwise he cannot be regarded as entitled to promotion to the Senior class or as a candidate for graduation. He must do the full



work of the year if he would advance with his class and share its honors.

If the student be a collegiate postgraduate in the Classics, Sciences, Letters, or the like, or has attained to equivalent acquirements by work and experience in professional pursuits, or lines of thought and study kindred to the law, he may be eligible primarily to membership in this class. In such case it would be necessary for him to undertake and perform the most essential work of the Elementary class in addition to his other duties. The practicability of the undertaking may be inferred from the fact that it is sought to do in this class fully the work of a year and a half, as gauged by the curricula of other educational institutions. That this has been done in many instances cannot be doubted, although there has never been special reference to any other institution, with a view to competition or as an incentive to exceptional effort. Presumably the result is due to a progressive system of instruction, more classes daily, a greater number of hours for study and the purpose of each member of the Faculty to do his best in the performance of duty. But, notwithstanding these facts, it is necessary for many of the students, no matter how well advanced or finished their education, to take the full course of three years. The fact that they might accomplish in two years all that is ordinarily done in three, makes no difference. This is due to the action of courts and legislatures in several States. A rule has been established requiring three years of actual study of the law as a prerequisite to applying for admission to the bar. Persons from these States must take the full three years' course, including the Elementary class. However, if their general education be finished, and it seem superfluous to do further collegiate work, they may select in preference the Junior, Senior and Postgraduate years as covering the time required for study in their States. Of

course, this question will not arise in States that require only two years of study, and students from such States who are entitled to postgraduate standing ought to be able to do in two years the ordinary work of three, and thus qualify themselves in that time to undergo without difficulty the most rigorous examination for admission to the bar.

In arranging the course of study it is sought to take subjects in their logical sequence. The less difficult, though by no means the less important, come in the Junior year, while the more technical are dealt with in the Senior year, except in the case of Pleadings and Evidence. A knowledge of these renders moot court work intelligible and profitable to an exceptional degree, and hence they enter into the plan of instruction in the Junior year. The moot court practice is an important factor in the course of instruction for all the classes, and there can be no question regarding the advisability of learning and applying the rules of pleading and evidence at as early a date as practicable. Following are the chief subjects of study in the Junior year and the names of some of the authors of text-books dealing with them:

**The Common and Statutory Laws, with Exercises in Case Reading and Statutory Construction.**

*Black on Interpretation of Laws, Bishop's Written Law, Sutherland on Statutory Construction, Curtis' Federal Statutes.*

**Persons and Domestic Relations.**

*Tiffany, Dwight, Schouler Reeves.*

**The Law of Contracts.**

*Clark, Lawson, Bishop, Beach, Anson, Parsons.*

**The Law of Torts.**

*Hale, Jaggard, Cooley, Hilliard, Addison, Bishop's Non-Contract Law.*

**Criminal Law and Procedure.**

*Clark, Bishop, Heard, May, Hawley & McGregor, Washburn, Wharton, Stephen.*

**Medical Jurisprudence**

*Reese, Beck, Dean, Taylor.*

**Common Law Pleadings.**

*Shipman, Gould, Stephen, Shinn, Heard, Chitty.*

**Code Pleadings and Practice.**

*Bliss, Maxwell, Boone, Works, Thompson on Trials, Elliott's General Practice, Elliott's Appellate Procedure, Foster's First Book of Practice.*

**Evidence.**

*Jones, Underhill, McKelvey, Greenleaf, Wharton, Reynolds, Roscoe, Wharton, Starkie, Stephen, Best.*

**Sales.**

*Tiffany, Tiedeman, Benjamin.*

**Insurance.**

*May, Elliott, Wood, Bliss.*

**Agency.**

*Mechem, Evans, Story, Wharton.*

**Partnership.**

*Bates, George, Lindley, Parsons, Pollock.*

It would be supererogatory to enumerate the subdivisions or branches of the subjects mentioned. All of them, however, receive due attention and are fully explained. And it may be stated that, with a view to enabling students to obviate the expense of purchasing many books, subjects of brief compass are taught, as may seem practicable, by means of lectures, case reading, quizzes, theses and moot court

trials. But should text-books be preferred at any time, resort may be had to their use.

### SENIOR CLASS—THIRD YEAR.

So much of what has been stated with reference to the preceding classes is applicable also to students of the Senior year that it will be unnecessary to enlarge on the nature of their work. A detailed description of it might involve repetition to some extent, and become tedious. Those eligible to membership are such as have satisfactorily finished the studies of the first and second years and earned the right to promotion. However, in compliance with a custom generally recognized, lawyers in good standing who desire to join the class, in order to broaden and systematize their knowledge of the law, are also admitted to it. On passing a satisfactory examination at the end of the year they become, like other students, entitled to the degree of LL. B. And the same courtesy is extended to students of good moral character who have acceptably finished the work of two years in law schools or law departments of other universities. The leading subjects of study, together with the names of the authors of some of the text-books treating of them, are here presented:

#### Equity Jurisprudence.

*Fetter, Tiedeman, Bispham, Snell, Story, Adams.*

#### Equity Pleadings and Practice.

*Shipman, Shinn, Story, Lube.*

#### International Law.

*Glenn, Hall, Story, Vattel, Woolsey, Wheaton, Wharton.*

#### Constitutional Law.

*Black, Cooley, Von Holst, Desty, Story, Hamilton, Madison and Jay in the Federalist.*

**Private and Municipal Corporations.**

*Clark, Elliott, Beach, Field, Angell & Ames, Dillon, Tiedeman, Wild.*

**Personal Property.**

*Tiedeman, Darlington, Schouler, Smith, Williams.*

**Real Property.**

*Hopkins, Tiedeman, Boone, Washburn, Willard, Williams.*

**Wills, Executors and Administrators.**

*Croswell, Redfield, Jarman, O'Hara, Wigram.*

**Bailments and Common Carriers.**

*Hale, Hutchinson, Edwards, Schouler, Story.*

**Negotiable Instruments or Commercial Paper.**

*Norton, Tiedeman, Daniel, Cholmers.*

**Suretyship and Guaranty.**

*Brandt, Baylies, De Colyar, Pitman.*

The subdivisions of the principal subjects indicated in the preceding list are, of course, included in the general terms designating these subjects, and it is unnecessary specially to enumerate them. For example, it would be superfluous to refer specifically to Arbitration, Demand, Estoppel, Injunction, Insolvency, Notice, Protest, Assessment, Taxation, Mandamus, Quo Warranto, Ultra Vires, Recoupment, Set-off, Counterclaim, and the like, for they are fully considered and explained in connection with the subjects to which they relate.

The subjects of study are not necessarily taken, one by one, in consecutive order, as given in the list. Three or four of them may engage the attention and demand the work of the class at the same time. To illustrate: The class meets for recitation three or four times daily, say once or

twice in the forenoon and twice in the afternoon. International Law may be chosen for the morning hour, special work in office business or court practice afterward, Equity Jurisprudence the first hour in the afternoon and Equity Pleadings later. Once a subject is chosen for a particular class, whether first, second or third in the daily routine, it is continued exclusively in the same class, without break or interruption, until finished. In the case supposed, Constitutional Law would probably follow International Law in the morning hour; the special work would still remain such, though changing in its development; Real Property might succeed Equity Jurisprudence in the afternoon, and Personal Property follow in the evening. The students meet twice a week with those of the Postgraduate course for the special work indicated, which consists in conveyancing, preparation of pleadings, the manner of taking appeals and office business generally. The Senior students are expected to devote from eighteen to twenty hours a week to class work.

By the system outlined in the foregoing paragraph it is sought to keep each subject before the mind of the student until he takes interest in and understands it. Thus it becomes distinctively and permanently fixed in the mind. The practice of teaching to the same class one subject one day, another the next, and still another the day following, as where non-resident professors, each with a different subject, follow daily one the other, finds no encouragement at Notre Dame. Such blending of subjects and intermingling of principles manifestly tend to confusion of thought and chaos of subject-matter. It is very difficult in such case to see and understand the law as a symmetrical whole—a system majestic and beautiful in its harmonious entirety.



## POSTGRADUATE COURSE—FOURTH YEAR.

Only graduates in law can be admitted to this course. But these may be from any other university in good standing, as well as from our own Law Department. A year can very profitably be given to the work prescribed for graduation in it. The degree conferred is that of Master of Laws. The work of this course is eminently practical and of the greatest possible utility to those who intend to engage in the practice of law on their own account at an early date, and not to give two or three years of probation to the drudgery of a clerkship at small salary in some office.

Every year of study greatly increases the interest of the student in the law and his power to understand it. If bright and industrious, he ought to be able to do as much effective work while a Senior as he did during the two preceding years, and his capacity to learn ought to increase in corresponding ratio in the Postgraduate course. By working earnestly and devotedly during the year he can review the studies of the preceding three years and confidently reach out in other directions to acquire additional knowledge. The nature of his work and the subjects of his study may be briefly indicated:

*Study of the Statutes and System of Pleadings of his State.*  
*Practice in Taking Depositions.*

*Frequent Participation in Moot Court Trials.*

*Arguments on Motions for New Trials.*

*Preparation of Bills of Exceptions, Briefs, Records and  
Abstracts of Records in Appeals.*

*The Framing of Arguments for a Rehearing.*

*Duties of Masters in Chancery, Referees and Arbitrators.*

*Duties of Assignees and Receivers; also, of Public Officers.*

*Examination of Abstracts of Title and the Making of Deeds,  
Mortgages, Leases, etc., in Conveyancing.*



*A Critical Study of Pleadings, with Reference to Forms and Substance.*

*Jurisdiction of the Federal Courts.*

*The Roman Law.*

*Comparative Constitutional Law and Jurisprudence.*

The exercises of the special class, held on Mondays and Wednesdays, are attended not only by the students of the Postgraduate course, but also by the Seniors. From a practical point of view, these exercises are highly important, and the change in them annually is sufficient to suggest novelty and make them highly interesting and instructive to the students of succeeding years, as where Seniors finish the Postgraduate course. This special work includes the examination of abstracts of title, practical examples in conveyancing, a critical study of the different forms of pleadings and the general business of a successfully conducted law office. While even one year of study is admittedly very helpful, if not actually necessary, yet the benefits and advantages that accrue from attending a second year cannot well be overestimated.

### THE COMMON LAW

is taught primarily at Notre Dame. This is the law generally prevailing throughout the Union—the law that obtains in the States. It addresses itself to almost all the relations of life. In fact, about nineteen out of every twenty cases tried in our courts are decided in accordance with its principles. It is generally uniform in its operation. However, the statutory enactments of State legislatures overcome and displace it, so far as they conflict with its provisions. These enactments differ materially in different States, owing to unlike conditions and local differences. Thus it is that the laws of certain States are so radically unlike the laws of

other States. Of course, there are instances in which statutes are passed to cover acts and conditions not provided for by the common law; but in most instances the existing statutes simply declare, qualify or render inoperative some of its rules

In view of these facts, thorough instruction is here given in the common law. Neither lawyers nor judges pretend to know the statutes of any other State than of that in which they practice or preside. In fact, a knowledge of the statutes of different States would be more confusing and bewildering than profitable to judges, lawyers and students. Moreover, they are liable to be radically changed from time to time by legislative bodies representing diverse political interests and opinions. In an examination for admission to the bar in this or any other State, no question is put and nothing is said relative to the statutes of sister States. In fact, the States are treated as foreign to one another in law. There are, however, certain fundamental statutory enactments that exist without material diversity in their scope and purpose in almost all the States. Again, other statutes somewhat less important and fundamental in character exist in groups of States. Such statutes as these may be profitably studied in class, in connection with the common law; but it would be worse than useless for a student to attempt to investigate and study the mazes of statutory differences in the several States. Hence, it is suggested as advisable for each Senior or Postgraduate student to procure and have with him for independent study when he comes in September a copy of the revised statutes of his State or of the State in which he intends to practice.

### GRADUATES

of the Law Department have met with exceptional success, it has been noted, in passing examinations for admission to

the bar. Nevertheless, it may be in point to state that it ought hereafter to be comparatively easy for them to meet the requirements of the most rigorous tests in that line, in view of the increase in the number of daily classes and the lengthening of the period of instruction. By way of showing the full accord and co-operation of the Faculty in that regard with the bench and bar of the country, attention may be drawn to the following authoritative expression on the subject, which is embodied in a resolution passed by the American Bar Association in 1897:

*"Resolved, That the American Bar Association approves the lengthening of the course of instruction in law schools to a period of three years, and that it expresses the hope that as soon as practicable a rule may be adopted in each State, which will require candidates for admission to the bar to study law for three years before applying for admission."*

It would certainly be disappointing now to meet a graduate timid at the prospect of an examination. With the right spirit and proper training, he ought to face it cheerfully and unhesitatingly. However, the Supreme Court of Indiana has adopted a rule providing for the admission of graduates of this Department on motion, or without examination. Under this rule they may, being voters, present themselves before the Judges of the Court, exhibit their diplomas, and, on motion of some attorney, followed by the administration to them of the oath of office, be admitted by proper order to the bar, receiving the certificates of licensed attorneys, and having their names inscribed on the "roll of honor" of the Court. This contains the names of those who furnish evidence of having satisfactorily finished the study of law before applying for admission to the bar.

#### THE LAW DEBATING SOCIETY

holds its meetings regularly on Saturday evenings. All students of the Department are members of it. They are

required, each in his turn, to participate in its debates and other exercises. The debates commonly deal with questions germane to the law. However, subjects of history, political economy, and the like, are also in favor. An excellent opportunity is afforded at the meetings of the society to develop skill, power and fluency in public speaking. The graces of the elocutionist and the persuasive power of the orator may here be cultivated and strengthened. All can increase in force and fluency of thought and expression by attending regularly and participating in the exercises of this society. Officers are elected twice yearly by the students themselves. They select also a competent critic to note the mistakes made in pronunciation or otherwise by the speakers at each meeting, and to read a carefully prepared paper correcting the same the following Saturday evening. A Professor presides at the meetings, aids the members by his counsel and suggestions, and decides the questions under discussion on the merits of the arguments.

### THE LAW LIBRARY

adjoins and communicates directly with the Lecture Room, in Sorin Hall. Students have uninterrupted access to it at all reasonable hours. They may frequent it as often as they choose for the purpose of studying cases, preparing for moot court trials, securing authorities for the monthly theses, referring to the cases cited in the text-books and lectures, or reading the standard treatises. Every decision rendered for many years by the State, Territorial and Federal courts may here be found. Consequently, not to repeat other reasons already stated, students are not required to purchase as many law books as they are obliged to have in other places. The books in the Library may be used by the law students in common as freely as can reasonably be wished, and without charge. The same is true relative to

the vast general collection of books in the Lemonnier Library. Law books may be taken from the Library to the Lecture Room for use in moot court trials, but they must afterward be returned. All students have an equal right to use them, being, as it were, tenants in common in that regard; but any disposition to invade the common right, whether through selfishness or thoughtlessness, by attempting to make exclusive use of them, as in placing them under cover in desks or taking them to private rooms, must be vigilantly guarded against and impartially discountenanced. Students have an undoubted right to expect that when they need any particular book they will find it in the Library, and not be compelled to lose valuable time in making inquiry for it elsewhere.

No discrimination is made between law students and students of the regular collegiate courses in the matter of

### EXPENSES.

The fee for tuition, board, lodging, washing, mending, etc., is fixed at \$300 for the scholastic year. This covers all real necessities, and, considering the excellent accommodations at Notre Dame, is believed to be very reasonable. It is said that students elsewhere must pay from \$400 to \$500 a year for like services and accommodations. The cost of books annually may be estimated approximately at \$30. Students have but little occasion or opportunity to spend money or to cultivate expensive habits; for they study, board and lodge at the University, in an atmosphere favorable to earnest work, and quite apart from the associations and temptations incident to city life. Terms of payment and other pertinent information may be found under the general caption "Expenses," on page 24. It may, perhaps, be well to anticipate possible inquiries by stating that no

additional charge is made for attending or becoming students of classes in the collegiate courses.

### DISCIPLINE.

The law students, as well as all others, are expected to be earnest and industrious in the performance of the duties devolving upon them, and to secure this end and the fullest practicable utilization of time the same rules of discipline apply to all the students. These rules require regularity in class attendance, uprightness in conduct and manliness in deportment. Obedience to them tends to strengthen character, establish wholesome habits and nourish in heart and mind the qualities that mark the true gentleman and earnest scholar, the honored citizen and successful lawyer, the independent thinker and firm believer in the illimitable possibilities of industry, perseverance and self-reliance.



## COMMERCIAL COURSE.



This Course can be completed in two years. It includes arithmetic, grammar, letter-writing, geography, United States history, reading, orthography, penmanship, book-keeping, Commercial Law—in other words, all the branches of a complete business education.

When the character and needs of the country are considered, this Course will appear the most practical, and one of the most important that an educational institution can afford.

Those, therefore, who have not the time or means to take a complete college course in the Classics and Sciences, would do well to enroll themselves in the Commercial Course. No plan of study is more injudicious than a haphazard selection of such studies as an inexperienced young man may fancy. The training resulting from a fixed course of studies is of the utmost benefit to the student.

The Commercial Course at Notre Dame has always received the most careful attention from the officers and the Commercial Faculty of the University. Notre Dame claims to give the graduates of this Course a more complete business training than can be obtained in any purely commercial college. Believing that a business education includes something more than a mere knowledge of book-keeping, and that a good education cannot be obtained in a few weeks, the authorities have extended this Course over two years—the shortest time in which studies necessarily used in business life can be mastered. Should a pupil desire during this period to pursue any other studies in which he may be



interested, and for which he has time, he will have liberty to do so.

General History and Linear Drawing are especially recommended to commercial students. They also have an opportunity of attending an elementary course of the Physical and Natural Sciences. Many commercial students find it also to their advantage to keep up the study of German or French, for which there are the amplest facilities. A talented and studious young man may thus in the course of two years find himself in the possession of a most valuable practical education, which will fit him to take his place in the front rank of educated business men.



## JUNIOR YEAR.

### FIRST TERM.

1. **Arithmetic**—Written and Mental—To Decimal Fractions (exclusive). Normal Union Arithmetic, *Brooks*.

2. **Grammar**—To Irregular Verbs (inclusive). Revised English Grammar.

3. **Letter Writing.**

4. **Reading and Orthography.**

5. **Geography**—General Geography of the World; Special Geography of the United States.

6. **United States History**—Through the French and Indian War.

7 **Penmanship.**

### SECOND TERM.

1. **Arithmetic**—Decimal Fractions; Denominate Numbers; Practical Measurements. Normal Union Arithmetic, *Brooks*.

2. **Grammar**—From Irregular Verbs to Syntax. Revised English Grammar.
3. **Letter Writing.**
4. **Reading and Orthography.**
5. **Geography**—Special Geography of South America, Europe, Asia, and Africa.
6. **United States History**—From the French and Indian War to the present time.
7. **Penmanship.**



## SENIOR YEAR.

### FIRST TERM.

1. **Arithmetic**—Percentage; Ratio and Proportion; as far as Involution and Evolution. Normal Union Arithmetic, *Brooks*.
2. **Bookkeeping**—Preparatory instruction and definitions; Initiatory Sets by Double Entry; Retailing by Double Entry; special practice in writing Business Paper and Business Forms. New Complete Bookkeeping, *Williams and Rogers*.
3. **Grammar**—Syntax. Revised English Grammar.
4. **Letter Writing.**
5. **Reading and Orthography.**
6. **Penmanship.**

### SECOND TERM.

1. **Arithmetic**—Percentage, Ratio and Proportion (reviewed); Involution and Evolution; Arithmetical and Geometrical Series; Higher Percentage; Mensuration; Arithmetical Analysis. Higher Arithmetic, *Brooks*.

**2. Bookkeeping**—Single Entry; changing Single to Double Entry; Retailing; Wholesaling; Shipping and Commission; Jobbing; Manufacturing; Installment and State Agencies; Joint Stock Companies; Banking; Railroading; Steamboating; Buying and Selling, Remitting, Collecting, Discounting, Accepting, and Paying Bills of Exchange. New Complete Bookkeeping, *Williams and Rogers*.

**3. Composition**—Study of the Theory of English Composition; frequent exercise in Essay and Letter Writing, etc. The Foundations of Rhetoric, *Hill*.

**4. Orthography.**

**5. Commercial Law**—General principles of Contracts; Agency; Partnership; Corporations; Guaranty; Sale of Goods; Negotiable Paper. *Clark*.

**6. Penmanship.**

## PREPARATORY SCHOOL.



MILITARY DRILL—All Preparatory Students of Carroll Hall are required to give two hours a week to Military Drill. Uniform Obligatory.

## FIRST YEAR.

## FIRST TERM.

**Latin**—Latin Grammar, Etymology, *Bennett*. First Book in Latin, *Tuell and Fowler*. Viri Romæ.

**English**—Grammar; Etymology; Themes.

**History**—United States History to the end of the Revolutionary War.

**Geography**—General Geography of the World. Special Geography of the United States.

**Mathematics**—Arithmetic, Fractions.

**Military Drill**—One hour a week throughout the year.

## SECOND TERM.

**Latin**—Continuation of First Term work.

**English**—(a) Grammar: Etymology continued. (b) Readings in Class: Longfellow's *Tales of a Wayside Inn*; Stevenson's *Treasure Island*; Defoe's *Robinson Crusoe*. (c) Themes: Subject matter taken from Longfellow's *Tales of a Wayside Inn*; Original Composition. The dictionary required throughout the Preparatory Courses is the *Standard English Dictionary* (Student's Edition).

**History**—United States History, from the Revolutionary War to the present time.

**Geography**—Special Political Geography of Europe, Asia and Africa, with outlines of the Physical Geography.

**Mathematics**—Arithmetic, from Fractions to Compound Numbers.



## SECOND YEAR.

### FIRST TERM.

**Latin**—Grammar; Etymology reviewed and general rules of Syntax. *Bennett*. Cæsar; Gallic War, Books I. and II.; Composition—based on the text of Cæsar.

**Greek**—Grammar: Etymology. *Goodwin's*. Exercises, *First Greek Book*, White. (For Classical Students only.)

**English**—(a) Grammar: Syntax, Revised English Grammar. (b) Readings in class: Scott's *The Lady of the Lake*; Longfellow's *Evangeline*; Irving's *Sketch Book*; Newman's *Callista*. Themes: subject matter taken from the books read in class; Original Composition.

**Mathematics**—Arithmetic, from Compound Numbers to Percentage.

**French and German** begun by candidates for Engineering and Scientific Courses. (See entrance requirements of these Courses.)

### SECOND TERM.

**Latin**—Cæsar, Gallic War, Books III. and IV.; Composition, based on Cæsar's text; Grammar, Syntax finished, *Bennett*.

**Greek**—Grammar: Etymology Completed, Exercises, *First Greek Book*, White; Gospel of St. Luke; Selections, *Gate to the Anabasis*, Gleason.

**English**—Work of the First Term continued.

**Mathematics**—Arithmetic, from Percentage and Involution.

**Algebra**—This Course is designed for beginners in Algebra, and comprises a complete study of the primary operations and fundamental principles of the science; thorough drill work in Composition and Factoring; Highest Common Factor and Lowest Common Multiple. When competency is assured in these subjects, the principles of Fractions are considered; also exercises in reduction of Complex Fractions.



## THIRD YEAR.

### FIRST TERM.

**Latin**—Sallust: Catiline; Composition based on text of Sallust; Grammar, review, *Bennett*; Ovid: Metamorphoses.

**Greek**—Grammar, *Goodwin's* Etymology reviewed; Syntax. Xenophon's *Anabasis*. Prose Composition, based on the text of the *Anabasis*.

**English**—Rhetoric, Hills' *Foundations of Rhetoric*; History of American Literature, Painter's *Introduction to American Literature*; Themes, application of Rhetoric; Readings in Class: Tennyson's *Princess*, Professor Cook's text; Milton's *Paradise Lost*, Books I. and II.; *L'Allegro*, *Il Penseroso*, *Lycidas*.

**Algebra**—This Course begins with a study of the Equation and Methods of Transformation and solution of Simple Equations; solution of problems of one and two unknown quantities; Fractional Equations; Simultaneous Equations of the first degree, and solution of problems of two or more

unknown quantities. Then are considered elementary cases of Indeterminate Problems, discussion of Problems and Inequalities; principles of Involution and Evolution, and theory of Exponents; Radical and Imaginary Expressions; Quadratic Surds; Radical Equations and Solution of Problems.

**Geometry, Plane**—The whole subject of Plane Geometry as given in Wentworth's *New Plane and Solid Geometry*. The solution of original problems and theorems constitute the greater part of the Course. The student's proficiency is determined by examinations in which he is required to devise proofs of original and independent propositions.

(a) **Elementary Chemistry**—An Introductory Course of experimental lectures on familiar substances such as water, the air and its constituents, common salt, etc., leading up to discussions of the more important elements and their properties, and the fundamental laws and phenomena of Chemistry. Reference-book, *Remsen*.

(b) **Experimental Chemistry**—A Laboratory Course to accompany Course *a*. A series of exercises to be performed by each student, and having as their main object the cultivation of the student's powers of observation and faculty of inductive reasoning. These exercises comprise a study of the principal metallic elements, including their preparation, properties, and more familiar compounds. The directions for each experiment are made as brief as possible, the observation of facts and the drawing of correct conclusions therefrom being left, so far as the nature of the experiment will permit, to the pupil.

**Physics, Elementary**—A Course of recitations and lectures, including Mechanics, Heat, Sound, Light, Electricity and Magnetism. The work is fully illustrated by experiments.



**Physiology**—Elementary.

**Botany**—Elementary. (For Civil Engineering Students.)

**History**—(a) United States,  
(b) General outlines. See page 94.

## SECOND TERM.

**Latin**—Cicero, Catilinaria; Composition based on Cicero's text; Virgil, Eclogues or Georgics; Prosody; Scansion of Hexameter Verse.

**Greek**—Grammar: General Rules of Syntax; Xenophon, Anabasis entire; Composition, based on the text of the Anabasis.

**English**—Continuation of the First Term work.

**Algebra**—This Course begins with a review of Radicals. Then follows a study of Pure and Affected Quadratic Equations and Simultaneous Quadratics; solution of problems involving Quadratics; Arithmetical and Geometrical Progressions; discussions of Simple Indeterminate Equations and exercises. Solution of problems is rigidly enforced and numerous original exercises are added to supplement the work.

**Geometry, Solid**—Theorems pertaining to Planes and Polyhedral Angles, Polyhedrons, the Cylinder, Cone and Sphere. The study of Spherical Angles, Spherical Surfaces, the Measure of Spherical Surfaces, receive all the attention necessary to familiarize the student with this important and practical part of Geometry. Solution of original exercises, proofs of independent propositions and examinations.

**History**—See First Term.

**Zoology**—Elementary. (For Civil Engineering Students.)

Minim Department.

## MINIM DEPARTMENT.



For the care and training of boys under the age of thirteen years, there has been established a department to which the most scrupulous attention has always been paid by the college authorities; it is known as the Minim Department.

Thorough and comprehensive instruction in all the elementary branches of an English education is here imparted, together with a rudimentary knowledge of Latin, French and German. Vocal Music and Drawing Course no extra charge. The pupils of this department are taught by Sisters of the Holy Cross.

### DISCIPLINE.

The following is the order of the day: Rising at 6:40 a. m., toilet, etc.; seven, breakfast, after which there is a short time given for exercises on the campus; half-past seven, study; half-past nine, luncheon; ten, study; a quarter to twelve, toilet; twelve, dinner, followed by recreation; half-past one, study; half-past three, recreation and luncheon; half-past six, supper and recreation; half-past eight, retiring. From this it may be seen that while the Minims devote less than six hours a day to study, they are never more than two hours in succession in the class-room. The recreation and exercise in the fresh air between each two hours of study, unbend the mind and prepare the boys to return to their classes refreshed and ready for work.

The Minims are always under supervision, during the hours of recreation as well as in the class-room and study-hall. The presence, however, of the Prefect is far from being a restraint on the amusement of the boys; for while it is the duty of the Prefects to insist that their young charges shall always keep within the limits of the strictest propriety, they, at the same time, take part in all sports, organize games, and do everything in their power to foster the love of exercises. The play-ground is a broad, level, five-acre field, well supplied with turning poles, swings, ladders, rings, parallel-bars, and all other necessary gymnastic apparatus. That the boys make good use of them can be seen from their healthy, happy appearance, which invariably attracts the notice of visitors. Connected with the play-ground is a brick play-hall, 160 feet long and heated by steam. In this hall the boys play in rainy or cold weather.

The Sisters preside at the toilet; they clean and mend the clothing; see to all the needs and to the comfort and convenience of the Minims. Baths are taken every few days. Underclothing is changed regularly. Great care is taken that the boys be neatly dressed, and that the clothing be suitable for the season.

### SOCIETIES.

There are two societies in the Minim department; that of the Guardian Angels of the Sanctuary, which has for its object to supply servers for the Church offices; and the Sorin Association, which has been established with a view to give the pupils a start, as early as possible, in elocution. The society is presided over by one of the professors, who find it a pleasant duty to draw out the talent of these interesting young orators. Meetings are held once a week, after school hours. These meetings are a source of pleasure as well as

of profit. The members prepare original compositions, deliver declamations, are trained to debate, etc. Only the best behaved and more advanced in studies are admitted to membership. To encourage this young Literary Society, a Gold Medal is annually awarded at Commencement for Elocution to the most deserving member.

### GENERAL REMARKS.

The discipline to which the Minims are subjected is much milder than that which is suited to students more advanced in age. Recourse is scarcely ever had to punishment. Those in charge endeavor to govern by kindness and gentleness, and by appealing to the boys' sense of honor. The names of all whose conduct and application to studies are satisfactory appear under the heads of Roll of Honor and Class Honors. To find his name mentioned in these rolls, is found to be as great a reward for the deserving pupil, as its non-appearance is a punishment for the undeserving.

Then, too, there is a Gold Medal awarded at the end of two full years to those whose deportment has been unexceptionable during that period. As this fact is made known to the Minim immediately after his entrance, he generally endeavors to shape his conduct with a view to receiving an "Honor." The greatest care is taken to form their young hearts to habits of virtue, and to inculcate the practice of refined manners. Every effort is made to foster respect and affection for parents, to whom they are expected to write at least once a week.

Not the least of the advantages enjoyed by the Minims is their complete separation from the larger students. A commodious building, known as St. Edward's Hall, affording ample accommodations for over one hundred

pupils, is devoted to their use. It is four stories in height, one hundred and fifty feet long, and forty-five feet wide; heated by steam, supplied throughout with the Edison incandescent electric light, and provided with hot and cold water. The ceilings in the Study-Hall, Class-Rooms and sleeping apartment are fifteen feet high. The windows are large and numerous, affording abundant light and ventilation. The Study-Hall commands a charming view from each of its eleven large windows. It is tastefully decorated with statuary, pictures, plants, etc. Beside the pleasure the Minims derive from studying in this bright, cheerful hall, their tastes are cultured by coming in contact with objects so refining. Fronting the building is a handsome park, which, with its fountains, rare trees and flowers, adds not a little to the beauty of St. Edward's Hall, as well as to the happiness of its inmates.

These remarks, which have been made to satisfy parents and others who frequently write for more detailed information, will show that, while the Minims have every possible advantage to aid them in acquiring a foundation for future study, they have a home, where they enjoy the same ease and freedom that they would enjoy under the care of their mothers.

## EXPENSES.



Matriculation Fee (payable on first entrance),	. \$ 10.00
Board, Tuition, etc., per session of ten months,	. . 250.00

The above rates are payable in advance as follows:

On entrance in September,	. \$150.00
January 15th, . . . . .	100.00

### EXTRAS OPTIONAL.

The charge per session of ten months for Piano lessons, and the use of instrument in this department is \$25.00; for Violin, Guitar or Mandolin, \$15.00.

**Pupils who remain during the two Summer  
Vacation Months are charged \$40.00.**

Accounts are subject to sight draft, without notice, if not paid within ten days after they have been rendered.

Each pupil, on entering this department, should have six shirts, four pairs of drawers, four night shirts, twelve pocket handkerchiefs, six pairs of stockings, six towels, two hats or caps, two pairs of shoes, two suits of clothes for winter, two suits for summer, one overcoat, toilet articles, etc. This direction concerning clothing is a suggestion, not a regulation.



## CATALOGUE OF STUDENTS.

From September 1898, to June 1899.



In this list are not included the names of those students who were dismissed or withdrawn at the request of the College authorities during the scholastic year.

Adams, William J.....	Montana.....
Arana, Victor M.....	Peru, S. A.....
Ahern, Eugene T.....	Illinois.....
Arce, Julius A.....	Peru, S. A.....
Ahrens, Edward G.....	Iowa.....
Atherton, Chester H.....	Iowa.....
Althoff, Arnold S.....	Indiana.....
Askanas, Jacob S.....	Missouri.....
Abercrombie, John J.....	Illinois.....
Abrahams, Louis L.....	Illinois.....
Arnold, Charles W.....	Indiana.....
Bouwens, Francis S.....	Indiana.....
Byrne, John M.....	Illinois.....
Brucker, Stephen J.....	Wisconsin .....
Brown, Edward C.....	Iowa.....
Bohner, George H.....	Illinois.....
Baab, Charles J.....	Pennsylvania .....
Blackman, Charles E.....	Minnesota.....
Brogan, Anthony J.....	Pennsylvania .....
Baldwin, William E.....	Illinois.....
Beltram, Miguel L.....	Mexico.....
Bennett, Anson M.....	Montana.....
Bouza, Francis E.....	South Dakota.....
Bouza, John J.....	South Dakota.....
Bäer, Fred L.....	Pennsylvania .....
Berry, William A.....	Missouri.....
Berry, James E.....	Missouri.....

Burke, Charles A.....	Ohio.....
Burg, Leo J.....	Iowa.....
Barry, Harry P.....	Iowa.....
Becker, Alphonse M.....	Minnesota.....
Becker, John J.....	Indiana.....
Butler, Philip.....	Nova Scotia.....
Brown Robert P.....	Iowa.....
Benson, Charles A.....	Rhode Island.....
Brand, William L.....	Indiana.....
Burke, John.....	Wisconsin.....
Barry, Francis J.....	Illinois.....
Bittner, William.....	Indiana.....
Brennan, Vincent F.....	New York.....
Britt, Henry A.....	Michigan.....
Banholzer, Harry.....	Illinois.....
Breslin, Francis D.....	Pennsylvania.....
Barrett, Glenn W.....	Michigan.....
Bloch, Herbert.....	Ohio.....
Brehmer, Charles H.....	Indiana.....
Brown, Henry E.....	Ohio.....
Bough, Edwin F.....	Indiana.....
Bligh, Michael F.....	Indiana.....
Bellinger, William W. J.....	New York.....
Brice, William C.....	Ohio.....
Best, Louis E.....	Montana.....
Baackes, Godfrey W.....	Ohio.....
Brown, August J.....	Ohio.....
Brady, John A.....	New Jersey.....
Bender, Edward A.....	Illinois.....
Bosworth, Alvah C.....	Illinois.....
Bernero, John C.....	Illinois.....
Bemis, Bertram V.....	Illinois.....
Boyle, Henry J.....	Illinois.....
Blanchfield, Walter J.....	Illinois.....
Butler, Thomas J.....	Ohio.....
Butler, William J.....	Ohio.....
Bortell, Paulus T.....	Illinois.....
Bortell, Charles E.....	Illinois.....
Burke, Joseph.....	Wisconsin.....
Blume, August D.....	Michigan.....

Bortz, Walter F.....	Indiana.....
Brown, John W.....	Indiana.....
Baker, Clarence F.....	Michigan.....
Bump, Alex. P.....	Illinois.....
Burns, William J.....	Pennsylvania ....
Burton, Lester W....	Illinois....
Cypher, George A.....	Pennsylvania ....
Cornell, Francis B.....	New York.....
Corcoran, Patrick J....	Illinois....
Crumley, Harry V.....	Ohio.....
Collins, Daniel E.....	Massachusetts....
Cortes, Carlos E.....	Mexico.....
Crunican, Austin J.....	Canada....
Collar, Thomas J.....	Indiana.....
Coolidge, Ellis.....	Arkansas..
• Clare, Arthur W.....	South Dakota....
Casey, Joseph A.....	California.....
Connor, Michael J.....	Pennsylvania ....
Carlton, Joseph R.....	New Jersey....
Cullinan, Joseph.....	Indiana.....
Crepeau, Med. W.....	Indiana.....
Corley, John L.....	Missouri.....
Corley, Emmett.....	Missouri.....
Claffey, Joseph E.....	Indiana.....
Curran, William.....	Indiana.....
Curtis, Thomas.....	Ohio.....
Curtis, Patrick A.....	Wisconsin.....
Coquillard, Joseph A.....	Indiana.....
Clyne, Joseph A.....	Kansas.....
Clarkson, Edward H....	Florida.....
Comer, Matthew M.....	Indiana.....
Clark, Robert R.....	Illinois.....
Cressey, Clement G.....	Indiana.....
Cunnea, John J.....	Illinois.....
Crowley, Michael J.....	Illinois.....
Cooney, Maurice J.....	Illinois.....
Cooney, Daniel E.....	Illinois.....
Carney, Otis P.....	Illinois.....
Coquillard, Alexis.....	Indiana.....
Connolly, Cassius H....	Illinois....

Casparis, Kenneth E.....	Ohio.....
Comerford, William P.....	Illinois.....
Comerford, Thomas J.....	Illinois.....
Carey, Clarence C.....	Illinois.....
Carey, Howard C.....	Illinois.....
Crowley, Timothy J.....	Indiana.....
Dowd, John J.....	Illinois.....
Dwyer, Vincent D.....	Indiana.....
Diskin, Patrick.....	Pennsylvania.....
Duane, Joseph J.....	Illinois.....
Delaney, Eugene A.....	Pennsylvania.....
Dukette, Francis F.....	Michigan.....
Dorley, Anthony F.....	Pennsylvania.....
Duperier, Alfred J.....	Louisiana.....
Dwyer, Thomas F.....	Rhode Island.....
Devine, Mark A.....	Illinois.....
Dillon, Thomas J.....	Minnesota.....
Dinnen, William F.....	Indiana.....
Dalton, William D.....	Indiana.....
Donahoe, Matthew J.....	Illinois.....
Darst, Eddens J.....	Illinois.....
Dominguez, Rafael.....	Mexico.....
DeVore, Charles T. B.....	Indiana.....
DuComb, Rolland F.....	Indiana.....
Danaher, Ray E.....	Michigan.....
Drejer, Stanslaus P.....	Indiana.....
Donovan, John F.....	South Dakota.....
Daly, Charles E.....	New Jersey.....
Dwyer, Francis J.....	Indiana.....
Dorian, Francis P.....	Indiana.....
Dorian, James.....	Indiana.....
Dorn, Charles.....	Indiana.....
Druecke, Harry P.....	Minnesota.....
Daily, Edward T.....	Nebraska.....
Dyer, Grant C.....	Illinois.....
Dousett, George F.....	Illinois.....
Davis, Grover C.....	Indiana.....
Dougan George.....	Indiana.....
Duggan, James B.....	Iowa.....
DuBrul, Davila S.....	Ohio.....

Day, Francis M.....	Illinois .....
Downer, Henry O.....	Georgia .....
Donahoe, Henry.....	Illinois.....
Dessauer, Walter J. P.....	Illinois.....
Deur, Lorenzo J.....	Iowa.....
Davis, Ernest V.....	Indiana.....
DeLorimier, Arthur G .....	Indiana.....
DeWulf, Emil P .....	Indiana.....
Dwan, Patrick J.....	Indiana.....
Dee, Simon R.....	Illinois.....
DeRocher, Arthur H.....	Illinois.....
Dougherty, Philip F. H.....	District Columbia.
Dolan, Leroy.....	Illinois.....
Daay, Francis C.....	Massachusetts....
Dowling, Andrew.....	Indiana.. .....
Dempsey, Joseph.....	Illinois.....
Emerson, Ritchie J.....	Texas.....
Elitch, Charles J.....	California.....
Eyanson, John N.....	Indiana.....
Eggeman, John W.....	Indiana.....
Ellwanger, Ralph J.....	Iowa.....
Eigelsbach, Joseph J.....	Indiana.....
Ernst, Emile E.....	Ohio.....
Engelhardt, Clyde F.....	Illinois.....
Evans, Roland J.....	Illinois.....
Ervin, John B.....	Indiana.....
Evers, George W.....	Illinois.....
Euart, Charles L.....	Rhode Island....
Flannigan, Michael J.....	Minnesota.....
Fitzwilliams, Laurence S.....	California.....
Fleming, Charles F.....	Ohio.....
Fleming, Henry J.....	Ohio.....
Farragher, John.....	Ohio.....
Furry, William D.....	Indiana.....
Farley, John F.....	New Jersey.....
Folomir, Jose M.....	Mexico.....
Featherston, Louis M.....	Iowa.....
Fortin, Albert C.....	Illinois.....
Fuhrer, Mansfield M.....	Indiana.....

Fazendin, L. Joseph.....	Minnesota .....
Fogarty, James P.....	Pennsylvania .....
Fennessey, John J.....	Massachusetts.....
Follen, Peter E.....	Indiana .....
Fox, Robert L.....	Indiana.....
Foley, Charles E.....	Illinois.....
Fehr, Andrew F.....	Kentucky.....
Funk, Robert S.....	Wisconsin.....
Forbing, John W.....	Ohio.....
Furlong, Nicholas.....	Wisconsin.....
Flynn, Francis.....	Michigan.....
Flynn, James.....	Michigan.....
Fink, Henry S.....	Maryland.....
Finlay, George C.....	Illinois.....
Ferstl, William G.....	Indiana.....
Fahey, Joseph A.....	Georgia.....
Friedman, Arthur S.....	Illinois.....
Fahey, Thomas W.....	Georgia.....
Frost, W. Barrett.....	Missouri.....
Furlong, J. Howard.....	Illinois.....
Fleischer, Oscar F.....	Illinois.....
Fogarty, John H.....	Indiana.....
Fogarty, Fred. J.....	Indiana.....
Frain, Francis J.....	Indiana.....
Fleming, Shirley J.....	Ohio.....
Fuchs, Albert J.....	Illinois.....
Fuchs, Carl.....	Illinois.....
Fitzpatrick, William W.....	Texas.....
Frazer, James H.....	New York.....
Friddell, George.....	Idaho.....
Gaffney, George A.....	Connecticut.....
Gibbons, Arthur M. J.....	Ohio.....
Gooley, Laurence F.....	Indiana.....
Garza, Carlos.....	Mexico.....
Glasheen, William P.....	Illinois.....
Glynn, Ralph L.....	Wisconsin .....
Guilfoyle, William A.....	Illinois.....
Guerra, Eprique L.....	Mexico.....
Graham, Thomas J.....	Montana.....
Griesheimer, Fred M.....	Illinois.....

Gilbert, Edward J.....	Illinois.....
Grady, William P.....	Illinois.....
Geoghegan, Walter M.....	New York.....
Gibson, Norwood R.....	Illinois.....
Garza, Rodolfa M.....	Mexico.....
Guiff, Paul J.....	Indiana.....
Groogan, Dominic J.....	Pennsylvania ....
Goodall, Harvey L.....	Illinois.....
Gibbons, James F.....	Ohio.....
Graham, Percy C.....	Illinois.....
Giffin, Harry A.....	Nebraska.....
Galligan, James J.....	New York.....
Gorski, Marcellinus F.....	Illinois.....
Griffith, John R.....	Missouri.....
Giffin, Carlisle R.....	Nebraska.....
Gibson, Edwin G.....	Illinois.....
Goodhue, Wells E.....	Illinois.....
Gallagher, Hugh.....	Indiana.....
Gaston, Francisco G.....	Cuba.....
Hoban, Thomas M.....	Indiana.....
Hoban, Maurice J.....	Indiana.....
Heirholzer, Aloysius M.....	Ohio.....
Hayes, John E.....	Ohio.....
Hayes, Arthur T.....	Ohio.....
Hennebry, John F.....	Illinois.....
Herbert, Martin B.....	Illinois.....
Hamilton, Harry G.....	Iowa.....
Holmes, George W.....	Nebraska.....
Hayes, John P.....	New York.....
Herrera, Natividad.....	Texas.....
Hamilton, Richard H.....	Iowa.....
Harrington, Thomas M.....	Iowa.....
Hay, Edward F.....	Mexico.....
Hanhouser, George J.....	Pennsylvania ....
Holland, Leo.....	Ohio.....
Haley, Joseph M.....	Indiana.....
Hartung, Paul E.....	Illinois.....
Highstone, Sedgwick.....	Michigan.....
Hubbell, Lorenzo.....	Arizona.....
Higgins, William P.....	Massachusetts.....



Hinze, Carlos.....	Cuba.....
Hanner, John C.....	Ohio.....
Hickey, William R.....	Illinois.....
Hogan, Nicholas J.....	Illinois.....
Harmon, Rawson B.....	Illinois.....
Heiser, Leo A.....	Indiana.....
Henehan, Vincent P.....	Rhode Island.....
Hennesy, John J.....	Indiana.....
Horworth, George A.....	Indiana.....
Hart, Laurence A.....	Indiana.....
Hall, Wallace W.....	Illinois.....
Huleatt, Hugh W. P.....	Illinois.....
Houser, Benjamin H.....	Indiana.....
Hart, Jeremiah M.....	California.....
Harrison, William.....	Michigan.....
Harrison, Lionel M.....	Michigan.....
Irwin, Walter B.....	Illinois.....
Ill, Alphonsus P.....	Ohio.....
Johnson, Ernest E.....	Minnesota.....
Johnson, Reuben A.....	Minnesota.....
Johnson, J. Gillespie.....	Georgia.....
Jones, Vitus G.....	Michigan.....
Johnston, John.....	Indiana.....
Jonquet, Maurice A.....	Indiana.....
Kasper, Fred J.....	Illinois.....
Kinney, Joseph C.....	Wyoming.....
Kennedy, Richard McC.....	Wisconsin.....
Kellner, George W.....	Illinois.....
Kafton, Robert A.....	South Dakota.....
Kuppler, George W.....	Indiana.....
Kachur, Albert.....	Indiana.....
Kelly, George H.....	Wisconsin.....
Kehoe, James J.....	Georgia.....
Kelly, James W.....	Indiana.....
Kraus, Jacob J.....	Pennsylvania.....
Kegler, William C.....	Iowa.....
Krost, Robert A.....	Indiana.....
Kelly, John R.....	Indiana.....
Kolupa, Ladislaus.....	Indiana.....

Kelly, Leo J.....	Kansas.....
Krupka, James J.....	Illinois.....
Kasper, George W.....	Illinois.....
Krug, Albert L.....	Ohio.....
Kasper, Robert A.....	Illinois.....
Kortlander, Adolph G.....	Michigan.....
Kirwan, John.....	Illinois.....
Kelly, Edward A.....	Georgia.....
Kidwell, Franklin B.....	China.....
Kelley, John Leo.....	Indiana.....
Leffingwell, Charles W.....	Illinois.....
Lins, George J.....	Illinois.....
Lennon, Peter B.....	Michigan.....
Locke, J. Clyde.....	Indiana.....
LaRue, Russell L.....	Minnesota.....
Lilly, John M.....	Illinois.....
Lilly, Thomas P.....	Illinois.....
Lynch, Robert E.....	Illinois.....
Lyons, Leo.....	Ohio.....
Long, Matthew V.....	New York.....
Lahey, John.....	Michigan.....
Lavelle, John.....	Indiana.....
Lockwood, Elmer R.....	Indiana.....
Land, William B.....	Illinois.....
Leach, George W.....	Indiana.....
Luken, Laurence H.....	Indiana.....
Leonard, Edward J.....	Illinois.....
Landgraf, Harry H.....	Illinois.....
Lavin, Walter R.....	Rhode Island.....
Long, Edward T.....	Ohio.....
Lawton, Jasper H.....	Texas.....
Madden, George S.....	Illinois.....
Mack, Louis W.....	Colorado.....
Mahoney, John J.....	Illinois.....
Maloney, John J.....	Kentucky.....
Moore, William.....	Illinois.....
Meagher, John F.....	Kentucky.....
Mulcrone, Charles J.....	Michigan.....
Monahan, Athan G.....	Illinois.....

Monahan, Charles F.....	Illinois.....
Moriarty, Stephen R.....	Missouri.....
Moren, Paul E.....	Pennsylvania .....
Morrissey, John F.....	Michigan.....
Mendoza, Jose.....	Mexico.....
Merz, Arthur W.....	Pennsylvania .....
Monarch, Martin V.....	Kentucky.....
Mulcare, Thomas E.....	Missouri.....
Murray, Joseph J.....	Massachusetts.....
Maurin, Francis J.....	Minnesota.....
Morales, Martin.....	Mexico.....
Murphy, Thomas J.....	New York.....
Murphy, Francis T.....	Iowa.....
Morris, John C.....	Ohio.....
Monahan, William P.....	Illinois.....
Mullen, John I.....	Minnesota.....
Meyers, John R.....	Illinois.....
Myers, Dorrance D.....	Iowa.....
Medley, Thomas A.....	Kentucky.....
Murphy, James F.....	Illinois.....
Malone, William H.....	Indiana.....
Maloney, John A.....	Indiana.....
Mannix, James J.....	New Jersey.....
Macdonald, Edward A.....	Minnesota.....
Manderfeld, Hilger H.....	Minnesota.....
Miksak, Emil E.....	Illinois.....
Muno, Henry.....	Illinois.....
Manion, Percy P.....	Illinois.....
Maxcy, Sidney R.....	Illinois.....
Morgan, James E.....	Iowa.....
Murray, Thomas J.....	New York.....
Moxley, George T.....	Illinois.....
Mahoney, Daniel J.....	Illinois.....
Maher, William H. N.....	Illinois.....
Murphy, Hugh.....	Nebraska.....
Mulcare, Joseph E.....	Missouri.....
Mueller, Walter P.....	Montana.....
Moren, Louis H.....	Pennsylvania .....
Maroney, Joseph.....	Indiana.....
Marr, George A.....	Colorado.....

Murphy, Timothy J.....	Michigan .....
Manion, Edward L.....	Illinois.....
Manion, William B.....	Illinois.....
Miller, Clarence A.....	Illinois .....
McKeon, Frederick T.....	New Jersey.....
McBride, Paul H.....	Ohio.....
McBride, Louis W.....	Ohio.....
McBride, John L.....	Ohio.....
McBride, William.....	Ohio.....
McIver, Francis F.....	Illinois.....
McMaster, Belford C.....	Michigan.....
McMaster, Rolland J.....	Michigan.....
McConnachie, John A.....	Pennsylvania .....
McAdams, Harry C.....	Indiana.....
McGuire, George F.....	Illinois.....
McGuire, William F.....	Illinois.....
McCambridge, George J.....	Illinois.....
McGrath, Patrick.....	Ireland .....
McNaughton, James E.....	Illinois.....
McCarthy, Thomas E.....	Illinois.....
McMahon, James J.....	Michigan.....
McMahon, Owen J.....	Michigan.....
McDonnell, Alex. A.....	Wisconsin.....
McCollum, Francis X.....	New York.....
McCormack, Michael J.....	Tennessee.....
McGinnis, James H.....	Massachusetts.....
McLaughlin, John E.....	Pennsylvania .....
McGuire, Edward S.....	New York.....
McCallen, Francis C.....	Pennsylvania .....
McDonald, Angus D.....	Texas.....
McCarthy, Eugene E.....	Illinois.....
McIntyre, John E.....	Canada.....
McKeever, Francis H.....	Iowa.....
McNichols, William J.....	Illinois.....
McNulty, Michael P.....	New Jersey .....
McCarthy, Daniel J.....	Illinois.....
McElligott, Peter E.....	New York .....
McDermott, Charles.....	Indiana.....
McGoff, John.....	Michigan.....
McMahon, Thomas.....	Illinois.....

McQueen, Fred C.....	Michigan.....
McElroy, James W.....	Illinois.....
McCormack, James P.....	Utah.....
McCarthy, J. Ge ald.....	Illinois.....
McFarland, Alex. W.....	Ohio.....
McFarland, Clarence J.....	Ohio.....
McGeeney, James D.....	Illinois.....
McGeeney, Edward.....	Illinois.....
McNamee, George.....	Illinois.....
McNamee, William P.....	Illinois.....
McNamee, Charles.....	Illinois.....
McNamee, Peter.....	Illinois.....
Ninnemann, Carl F.....	Michigan.....
Nelson, Thaddeus G.....	Illinois.....
Naughton, Thomas M.....	Illinois.....
Newman, John W.....	Iowa.....
Norton, William T.....	Kentucky.....
Neeson, John J.....	Pennsylvania.....
Noonan, Thomas E.....	Illinois.....
Nissler, Carl C.....	Montana.....
Naughton, David A.....	Illinois.....
Nast, Edward C.....	Colorado.....
Nies, Charles H.....	Indiana.....
Neville, Maurice A.....	Ohio.....
Nash, Louis C.....	Nebraska.....
Nash, Richard.....	Illinois.....
Niewland, Julius A.....	Indiana.....
Narcelle, Edward P.....	South Dakota.....
O'Connell, John J.....	New York.....
O'Sullivan, James J.....	Indiana.....
Oswald, Mathias M.....	Indiana.....
O'Connor, William J.....	Kentucky.....
O'Hara, Francis J.....	California.....
O'Malley, Raymond G.....	Iowa.....
O'Shaughnessy, Francis.....	Missouri.....
O'Sullivan, St. John P.....	Kentucky.....
O'Brien, William W.....	Illinois.....
O'Shaughnessy, Martin.....	Missouri.....
O'Neil, Philip B.....	Indiana.....

O'Brien, John K.....	Minnesota.....
O'Reilly, Joseph P.....	Ohio.....
O'Malley, Linus C.....	Iowa.....
O'Shea, Daniel E.....	Michigan.....
O'Connor, George.....	Indiana.....
O'Brien, John W.....	Michigan.....
O'Leary, Thomas P.....	Michigan.....
Oberting, Marion S.....	Indiana.....
O'Neal, Harold J.....	Minnesota.....
O'Connell, Daniel G.....	Illinois.....
O'Connell, Robert M.....	Illinois.....
Ordetx, Guillermo F.....	Cuba.....
O'Connor, Edward I.....	Michigan.....
O'Brien, Francis B.....	Indiana.....
Phillip, George P.....	Illinois.....
Paul, Clement C.....	Indiana.....
Padden, Dominic J.....	Illinois.....
Plunkard, Homer A.....	Indiana.....
Petriz, Francis J. M.....	Montana.....
Phillip, Francis J.....	Illinois.....
Putnam, John L.....	Kentucky.....
Press, Arthur W.....	Illinois.....
Paulin, Henry E.....	Indiana.....
Pim, E. Howard.....	Missouri.....
Powers, Michael R.....	Massachusetts.....
Pickett, Stephen B.....	Ohio.....
Pulskamp, Edward H.....	Ohio.....
Powers, J. Fred.....	Massachusetts.....
Pienta, Stanislaus C.....	Michigan.....
Phelan, Francis.....	New York.....
Phillip, George P.....	Illinois.....
Quinlan, John M.....	Illinois.....
Ratchford, Hugh C.....	Illinois.....
Ritter, Paul A.....	Indiana.....
Ragan, Paul J.....	Ohio.....
Rahe, Henry J.....	Pennsylvania.....
Reed, Louis C. M.....	Indiana.....
Reuss, Charles J.....	Indiana.....
Richon, Alfred J.....	Michigan.....

Rowley, William A.....	Illinois.....
Revels, Henry H.....	Pennsylvania .....
Rincon, Luis G.....	Mexico.....
Rincon, Francisco.....	Mexico.....
Rebillot Paul F.....	Ohio.....
Rousseau, Jose.....	Cuba.....
Rumely, Edward A.....	Indiana .....
Roddy, Francis A.....	Ohio.....
Richey, Edward F.....	Illinois.....
Robert, Hubert R.....	Indiana .....
Ryan, Raymond J.....	Illinois.....
Rush, Charles E.....	Indiana.....
Reihing, William H.....	Pennsylvania.....
Real, Jose.....	Cuba.....
Romero, Vincent F.....	New Mexico .....
Sammon, Andrew J.....	Minnesota.....
Schumacher, Matthew A.....	Indiana.....
Schumacher, Frank A.....	Indiana.....
Sutton, James R.....	Iowa.....
Szalewski, Metzislau A.....	Indiana .....
Strong, Grover Dewey.....	Colorado.....
Schonlau, Claire E.....	Illinois.....
St. Clair, Hnntington H.....	Illinois.....
Shields, John A. B.....	Indiana.....
Schaus, Herbert G.....	Illinois.....
Sinnott, Edgar J.....	Indiana.....
Shipley, H. Everett.....	Iowa.....
Seymour, Gerald.....	Iowa.....
Sinnott, George A.....	New York.....
Storrs, John H.....	Illinois.....
Swan, Edmund F.....	Indiana.....
Sherlock, James P.....	Illinios.....
Stephan, Raymond V.....	Illinois.....
Stich, George F.....	Illinois.....
Smith, Jay B.....	Ohio.....
Slevin, John L. S.....	Illinois.....
Sheekey, Joseph J.....	Indiana.....
Stewart, Arthur M.....	Montana.....
Schermerhorn, Harry V.....	Michigan.....
Stuckey, Melvin C.....	Indiana.....



Stanton, Robert E.....	Ohio.....
Schoonover, Fred J.....	Minnesota.....
Stickling, Francis H.....	Illinois.....
Shields, Thomas.....	New York.....
Schwanz, Anthony.....	Indiana.....
Sherry, James.....	New York.....
Shibish, Stephen.....	Indiana.....
Sztuczko, Sigismund.....	Illinois.....
Sullivan, Sylvester J.....	Tennessee.....
Schmidt, Henry C.....	Illinois.....
Smith, George A.....	Indiana.....
Sherman, Henry A.....	Illinois.....
Sullivan, Joseph J.....	Illinois.....
Stephan, Anton C.....	Illinois.....
Scheubert, Charles E.....	Illinois.....
Schneider, John.....	Wisconsin.....
Sweeney, Charles.....	Washington.....
Shannon, William J.....	Illinois.....
Svensden, John J.....	Ohio.....
Schott, Francis L.....	New York.....
Schwab, Francis C.....	Pennsylvania.....
Shea, William A.....	Wisconsin.....
Sheekey, Eugene A.....	Pennsylvania.....
Senrich, George A.....	Indiana.....
Schilling, Andrew I.....	Wisconsin.....
Smoger, Francis A.....	Indiana.....
Smith, Ralph L.....	Missouri.....
Schaefer, Francis J.....	New York.....
Shiels, Joseph P.....	Illinois.....
Stuhlfauth, George.....	Wisconsin.....
Steiner, Thomas A.....	Michigan.....
Steele, Sherman E.....	Ohio.....
Smithwick, J. Thomas.....	Indiana.....
Suberbie, John.....	Mexico.....
Taylor, James G.....	New York.....
Tuohy, Joseph W.....	Illinois.....
Toohey, Joseph L.....	Ohio.....
Tuteur, Leopold.....	Indiana.....
Tucker, Joseph W.....	Michigan.....
Tillotson, William K.....	Illinois.....

Trentman, Stephen A.....	Indiana.....
Topper, David J.....	Illinois.....
Taylor, Bryan M.....	Missouri.....
Trahey, James J.....	Indiana.....
Tierney, William H.....	Wisconsin.....
Torres, Francisco G.....	Mexico.....
Taner, Thomas A.....	Minnesota.....
Villeneuve, Augustine G.....	Mexico.....
VanHee, Arthur J.....	Belgium.....
VanSant, Leport R.....	Illinois.....
VanDyke, Harold P.....	Michigan.....
Veneziani, Louis I.....	Indiana.....
Vennet, Arthur.....	Indiana.....
VanRie, Arthur.....	Indiana.....
VanDyke, James A.....	Michigan.....
VanDyke, George F.....	Michigan.....
VanSant, Ralph N.....	Michigan.....
Walsh, Matthew J.....	Illinois.....
Wimberg, William L.....	Illinois.....
Wainscott, George R.....	Iowa.....
Walsh, Edward J.....	Ireland.....
Welker, Vincent B.....	Ohio.....
Weadock, Louis T.....	Michigan.....
Ward, James A.....	Illinois.....
Winter, Francis W.....	Pennsylvania.....
Winter, Francis M.....	Pennsylvania.....
Wynne, Peter J.....	New Jersey.....
Wilson, Ralph M.....	Pennsylvania.....
Wieczorek, Ladislaus A.....	Indiana.....
Wurzer, Edward C.....	Michigan.....
Welch, Albert E.....	Illinois.....
Wolfe, Henry M.....	Ohio.....
Wren, Raphael J.....	Ohio.....
Wagner, Louis E.....	Illinois.....
Wies, Irwin L.....	Illinois.....
Williams, Robert W.....	Illinois.....
Weist, John L.....	Illinois.....
Wilde, George A.....	Indiana.....
Weber, Laurence K.....	Ohio.....

Wilson, Alex. A.....	Illinois.....
Welch, Francis M.....	Illinois.....
Woods, Bert L. T.....	Illinois.....
Willard, John A.....	Indiana.....
Warner, Henry B.....	Illinois.....
Ward, Hugh St. C.....	Illinois.....
Werk, Emile E.....	Ohio.....
Weidmann, George S.....	Ohio.....
Weidmann, Fritz M.....	Ohio.....
Walsh, Francis J.....	Illinois.....
Yockey, Edward J.....	Michigan.....
Zeigler, George F.....	Wisconsin.....
Zimmerman, Leo G.....	Indiana.....

Fifty-Fifth  
Annual Commencement.

## CONFERRING OF DEGREES.



**The Degree of Master of Science in Biology** was conferred on

Francis Joseph Powers, Trenton, N. J.

**The Degree of Bachelor of Arts** in course was conferred on

John F. Fennessey, Boston, Mass.

Julius A. Nieuwland, South Bend, Ind.

Matthew A. Schumacher, South Bend, Indiana.

James J. Trahey, Michigan City, Ind.

**The Degree of Bachelor of Letters** was conferred on

Edward C. Brown, Sheldon, Iowa.

John J. Dowd, Bristol, Ill.

Joseph F. Duane, Peoria, Ill.

**The Degree of Civil Engineer** was conferred on

Julius A. Arce, Arequipa, Peru, S. America.

Chester H. Atherton, Des Moines, Ia.

Eugene A. Delaney, Lykens, Pa.

Walter Geoghegan, Lockport, N. Y.

Wm. C. Kegler, Bellevue, Ia.

Maurice A. Neville, London, Ohio.

Francis J. O'Hara, San Francisco, California.

Thomas A. Steiner, Monroe, Mich.

**The Degree of Mechanical Engineer** was conferred on

Edward H. Pulskamp, Celina, Ohio.

**The Degree of Bachelor of Science in Biology** was conferred on

Wm. P. Grady, Chicago, Ill.

The Degree of Master of Laws was conferred on  
Charles E. Blackman, Winona, Minn.

The Degree of Bachelor of Laws was conferred on  
Stephen J. Brucker, Fond du Lac, Wis.  
Patrick J. Corcoran, Riverton, Ill.  
Leo Holland, London, Ohio.  
Joseph M. Haley, Fort Wayne, Ind.  
Paul E. Hartung, Chicago, Ill.  
Jacob J. Kraus, Pittsburgh, Pa.  
J. F. Murphy, Chebanse, Ill.  
John R. Meyers, Pekin, Ill.  
Michael J. McCormack, Memphis, Tennessee.  
Thomas M. Hoban, South Bend, Ind.  
Stephen B. Pickett, Toledo, Ohio.  
Sherman R. Steele, Columbus, Ohio.  
Edward J. Walsh, Kilkenny, Ireland.  
Louis T. Weadock, Saginaw, Mich.  
Edward J. Yockey, Escanaba, Mich.

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### Commercial Course.



Commercial Course Diplomas were awarded to  
B. Clement, Notre Dame, Ind.  
B. Ernest, Notre Dame, Ind.  
Ladislaus A. Wiczorek, South Bend, Ind.  
John F. Donovan, Beresford, South Dakota.  
Stanislaus P. Drejer, South Bend, Ind.  
Anton C. Stephan, Scales Mound, Ill.  
Meddie W. Crepeau, South Bend, Ind.  
Frederick J. Kasper, Chicago, Ill.  
Albert C. Fortin, Chicago, Ill.

**Certificates in Telegraphy** were awarded to  
José Mendoza, Guzman, Jalisco, Mex.  
Louis M. Fetherston, What Cheer, Iowa.

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### Prize Medals.



**The Quan Gold Medal**, presented by Mr. Henry Quan of Chicago, for the student having the best record in the Classical Course, senior year, was awarded to James J. Trahey, Michigan City, Indiana.

**The Mason Medal**, presented by Mr. George Mason of Chicago, for the student of Carroll Hall having the best record for the scholastic year, was awarded to Raymond V. Stephan, Scales Mound, Ill.

**The Breen Gold Medal** for Oratory, donated by the Hon. Wm. P. Breen, '77, of Fort Wayne, was awarded to Paul J. Ragan, Maumee, Ohio.

**The Meehan Gold Medal** for English Essays, presented by Mrs. James Meehan of Covington, Kentucky, not awarded.

**The Ellsworth C. Hughes Medal**, presented by Mr. A. S. Hughes, Denver, Colorado, for the best record in Mathematics, was awarded to Eugene A. Delaney, Lykens, Penn.

**The University Gold Medal** for proficiency in Mathematics during the four years of the Collegiate Course, donated by the Notre Dame University Association of Chicago, was awarded to Thomas Steiner, Monroe, Mich.



The Rademacher Grand Gold Medal, donated by the Right Rev. Bishop of Fort Wayne, for Christian Doctrine in Brownson, Hall First Course, was awarded to John F. Farley, Patterson, New Jersey.

The Medal for Christian Doctrine in Brownson Hall, Second Course, was awarded to Anton C. Stephan, Scales Mound, Illinois.

The Gold Medal for Christian Doctrine in Brownson Hall, Third Course, was awarded to Thomas J. Murphy, New York City.

The Gold Medal for Christian Doctrine in Carroll Hall, First Course, was awarded to Thomas J. Murray, New York City.

Gold Medal for Christian Doctrine in Carroll Hall, Second Course, was awarded to George J. McCambridge, Morris, Illinois.

The Commercial Gold Medal for highest standing in the senior year Commercial, was awarded to Anton Stephan, Scales Mound, Ill.

The Barry Elocution Medal in Brownson Hall, donated by the Hon. P. T. Barry of Chicago, was awarded to Alfred J. Duperier, New Iberia, La.

Gold Medal for Elocution in Carroll Hall was awarded to Frederick Schoonover, Duluth, Minn.

Gold Medal for Elocution in Holy Cross Hall was awarded to Charles L. Euart, Providence, Rhode Island.

**The Military 1st Prize Medal**, Carroll Hall, was awarded to  
Ralph J. Ellwanger, Dubuque, Iowa.

**The Military 2d Prize Medal**, Carroll Hall, was awarded to  
Grover C. Davis, Muncie, Ind.

**ST. EDWARD'S HALL.**

**The Gold Medal** for improvement in Piano was awarded to  
Paulus T. Bortell.

**The Silver Medals** for improvement in Piano were  
awarded to  
Kenneth E. Casparis,  
William P. McNamee.

## First Honor Awards.



[First Honors are awarded to students of Sorin and Brownson Halls, who have attained an average of atleast 90 per cent. for scholarship and deportment during the scholastic year. The first honor awarded for the first year takes the form of a diploma; that awarded for two years of satisfactory work is a gold medal. This medal may be renewed from year to year.]

### SORIN HALL.

**First Honor Gold Medals** were awarded to  
Eugene A. Delaney, Lykens, Pennsylvania.  
(3d renewal.)  
Thomas A. Steiner, Monroe, Michigan.  
(2d renewal.)  
William P. Monahan, Chicago.  
St. John P. O'Sullivan, Louisville, Ky.  
Edward C. Brown, Sheldon, Iowa.

**First Honor Diplomas** were awarded to  
Anthony F. Dorley, Lancaster, Penn.  
Francis J. O'Hara, San Francisco, Cal.

### BROWNSON HALL.

[No First Honor Medal awarded this year.]

**First Honor Diplomas** were awarded to  
Peter B. Lennon, Lennon, Mich.  
Eugene T. Ahern, Campus, Ill.  
Robert A. Kafton, Tyndall, South Dakota.  
Philip B. O'Neill, Anderson, Indiana.  
Francis C. Schwab, Altoona, Pennsylvania.

## Department Prize Medals.



[Gold Medal, for Department are awarded to pupils of Carroll and St. Edward's, Hall, who have spent two full years at Notre Dame, and whose deportment during the whole time has been unexceptionable.]

### CARROLL HALL.

**Gold Medals for Department** were awarded to

Albert L. Krug (renewal), James E. Morgan (renewal), Thos. J. Murray (renewal), William H. N. Maher (renewal), Thomas E. McCarthy (renewal), Jos. A. Clyne, J. Howard Furlong, Lawrence H. Luken, John L. S. Putnam, John M. Quinlan, Hugh St. Clair Ward.

### ST. EDWARD'S HALL.

William J. Butler, Henry O. Downer, Henry Donahoe, Wallace W. Hall, Albert Fuchs, J. Benjamin Houser, Hugh W. P. Huleatt, Alex. M. McFarland, David J. Topper, Carlisle R. Giffen, John B. Erwin (renewal).



[Silver Medals for Department are awarded to pupils of Carroll and St. Edward's Halls, who have spent two full years at Norte Dame, and whose deportment has given general satisfaction.]

### CARROLL HALL.

**Silver Medals for Department** were awarded to Lorenzo Hubbell, Guillermo Ordetx, Joseph J. Mulcare, Francis J. Phillip.

### ST. EDWARD'S HALL.

Carl Fuchs, Clarence J. McFarland, Charles E. Bortell, Frederick J. Fogarty, Huntington St. Clair, Carl J. Ninnemann, Belford C. McMaster, George P. Phillip.

## NEEDS OF THE UNIVERSITY.



Visitors to Notre Dame judge from the appearance of the buildings and grounds that the University has no need of money. It is, nevertheless, absolutely without endowment, and its work is seriously hampered because it has no resources except the fees of the students. There is *one* scholarship, and the interest from this foundation is used in educating and boarding a student.

There were last year 1,452 Catholic students in 6 per centum of the non-Catholic colleges of America, and very many of these will lose their faith, and all will be weakened in that faith, because our people look upon Collegiate Institutions as the property of private corporations which are to be left to take care of themselves.

Notre Dame asks for scholarships for boys that can not pay the expense of education, and who therefore are obliged to go to non-Catholic Colleges to the detriment of their faith. A foundation of \$5,000 will educate and board a student as long as the University exists. As one bursar is graduated another can take his place. The founder of the scholarship, of course, always has the privilege of appointing the student.

We lack money for a library building, and for two more dwelling-halls like Sorin Hall.

Two or three thousand dollars are required for finishing and equipping the new gymnasium.

Foundations for scholarships are also a pressing need.

There is no Library fund for the purchase of new books.

The names of benefactors will be given to all foundations.

Bequests should be made after this form :

UNIVERSITY OF NOTRE DAME.

---

*I give, devise and bequeath to the University of  
Notre Dame du Lac, an institution incorporated  
under the laws of the State of Indiana, and located  
at Notre Dame, Indiana, \_\_\_\_\_*

## The Notre Dame Scholastic,

Is the title of a neat 28-page paper, devoted to the interests of the students, and published by them at the University every week during Term time. This journal opens a field for young writers who might otherwise, for want of a proper medium, allow their talents to remain inactive. It also affords students an opportunity for practical experience in journalism. During seasons of special interest at the University, THE SCHOLASTIC is published daily.

THE SCHOLASTIC contains articles of an instructive literary character, interesting Biographical Sketches, Essays, Poetry, Notes on Art, Music, Science and Literature, Notes of New Publications, etc., etc.

In addition to its literary departments, THE SCHOLASTIC has a special importance for students, their parents, and all who have had classes at the University in times past, an account of the weekly summary of events happening at Notre Dame, personal Notices of former students, Class Honors, List of Excellence, etc., which appear in its columns every week. Reports relative to the arrangement of classes, the promotion of the more talented and energetic students, etc., also find a place in this paper and keep the parents and others informed about matters that concern their children and friends.

It will be the endeavor of the Editors during the coming year to merit the encouragement given the paper in the past, and the encomiums bestowed upon it by the press in general.

THE SCHOLASTIC will be sent to any address for \$1.50 per annum.

Address all communications to THE NOTRE DAME SCHOLASTIC, NOTRE DAME, INDIANA.



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### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MUSIC.

1. The candidate must have studied music for one year in the University.
2. He must have a thorough theoretic knowledge of the four instruments mentioned in the courses described above, and a practical mastery of one of them.
3. He must pass a written examination in Harmony, Counterpoint and Composition.
4. He must submit to the examiner two original compositions: (a) a fugue for full orchestra, or for four voices with independent orchestral accompaniment; (b) a composition in the free form (sonata or rondo) for pianoforte, or a trio (pianoforte, violin and violoncello.)

# St. Mary's Academy.

(One Mile West of the University of Notre Dame.)



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UNIVERSITY OF NOTRE DAME.  
Notre Dame, Indiana.

CATALOGUE

OF THE

UNIVERSITY OF NOTRE DAME,

---

1899-1900.

# DIRECTORY OF THE UNIVERSITY.

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The FACULTY—Address:

NOTRE DAME UNIVERSITY,

NOTRE DAME, INDIANA.

The STUDENTS—Address:

As for the Faculty, except that the name of the HALL in which the Student lives should be added.

A Postoffice, a Telegraph Office, and an Express Office are at the University.

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The University is two miles from the city of South Bend, Indiana, and about eighty miles east of Chicago. The Lake Shore & Michigan Southern, the Grand Trunk, the Vandalia, the Indiana, Illinois & Iowa, the St. Joseph, South Bend & Southern, and the Michigan Central railways run directly into South Bend.

## CALENDAR OF THE UNIVERSITY FOR 1900-1901.

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- SEPTEMBER 4. Examinations of Conditioned Students.  
5-6. Entrance Examinations.  
7. Schools Begin.  
16. Reading of the University Regulations in all the Halls.
- OCTOBER 13. Founder's Day. Holiday.  
27-29. Bi-Monthly Examinations.  
29. Annual Retreat begins in the Evening.
- NOVEMBER 1. Feast of All Saints. Holiday.  
29. Thanksgiving Day. Holiday.  
30. President's Day. Holiday.
- DECEMBER 8. Feast of the Immaculate Conception. Holiday.  
19-20. Winter Examinations.  
21. Christmas Vacation Begins.
- JANUARY 4. Schools Begin.
- FEBRUARY 22. Washington's Birthday. Holiday.  
23-25. Bi-Monthly Examinations.
- MARCH 17. St. Patrick's Day. Holiday.  
19. St. Joseph's Day. Holiday.
- APRIL 7. Easter Day. *No Vacation at Easter.*  
8. Easter Monday. Holiday.  
27-29. Bi-Monthly Examinations.
- MAY 1. Latest Date for handing in Prize and Graduation Essays in all Collegiate Courses.  
22. Contest in Elocution.  
30. Decoration Day. Holiday.  
29. Contest in Oratory.
- JUNE 8. Examination of Graduates Begins.  
9. Baccalaureate Sermon.  
10-12. General Examinations.  
12. Commencement. Preliminary Exercises,  
7:30 P. M.  
13. Graduation Exercises, 8:00 A. M.

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PHILIP B. WEISS, JR.,  
Gymnastics.

# NOTRE DAME UNIVERSITY.



The University of Notre Dame was founded in the year 1842, by the Very Reverend Edward Sorin, the late Superior General of the Congregation of the Holy Cross. In an act approved January 15, 1844, the Legislature of Indiana gave the University power to grant degrees. The beginning of this act is:

*"Be it enacted by the General Assembly of the State of Indiana, That Edward Frederick Sorin, Francis Lewis Cointet, Theophilus Jerome Marivault, Francis Gouesse, and their associates and successors in office, be, and are hereby constituted and declared to be, a body corporate and politic, by the name and style of the 'University of Notre Dame du Lac,' and by that name they shall have perpetual succession, with full power and authority to confer and grant, or cause to be conferred and granted, such degrees and diplomas in the liberal arts and sciences, and in law and medicine, as are usually conferred and granted in other Universities in the United States, provided, however, that no degree shall be conferred or diplomas granted, except to students who have acquired the same proficiency in the liberal arts and sciences, and in law and medicine, as is customary in other Universities in the United States."*



## UNIVERSITY BUILDINGS.



### THE MAIN BUILDING.

The dimensions of this building are 320 by 155 feet; it is five stories in height, and it is surmounted by a dome 207 feet in height. The executive offices, two study-halls, some dormitories and class-rooms and the refectories are in this building. The Library and the Bishops' Memorial Hall are also there temporarily. This building, like all others in the University, is lighted by electricity and gas, and heated by steam. The corridors of the first floor are decorated with mural paintings by Gregori. All the University buildings are made of yellow brick.

### THE CHURCH.

This building is 275 by 120 feet in ground dimensions and 125 feet in height from the ground to the roof-ridge. The interior is decorated by Gregori, and the architecture is Gothic. There is a large crypt and many chapels. In the tower are a chime of 32 bells and the great six-ton chief bell.

### THE LIBRARY.

The Library contains 55,000 volumes. Students have access to it from 8:00 A. M. to 9:00 P. M.

### WASHINGTON HALL.

This hall is 170 feet in length, 100 feet in width, and about 100 feet in height. It contains the rooms of the Musical department, the reading rooms for Brownson and Carroll Halls, and the University Theatre. The Theatre is equipped with stage settings, and it will contain 1,200 persons.

## SCIENCE HALL

is situated a few steps south of Washington Hall. The dimensions are 104 by 131 feet, and it is three stories in height. A large central space, the full height of the building, is occupied by the Museum containing mineral, fossil, and biological specimens.

THE CHEMICAL DEPARTMENT<sup>A</sup>

occupies the entire north side of the first and second floors of Science Hall.

On the second floor, and adjoining the General Museum, is a large and well lighted room reserved for a library and chemical museum. Here are a library of chemical journals and books, and a steadily increasing collection of minerals, chemicals, and chemical-technical products of all kinds, designed to serve as illustrations of substances and processes discussed in the various lecture courses. Adjoining this room are, successively, an apparatus-room, filled with the most modern apparatus for lecture and experimental work; a chemical store room, where laboratory supplies may be procured by the students; a lecture room, and a laboratory for Qualitative Analysis. The laboratory is furnished with four hoods, of good draught; the desks are provided with water, gas and the necessary reagents, and can furnish accommodation for fifty students. The lecture room is provided, among other things, with apparatus for stereopticon illustration, with electric batteries, and with a complete set of charts illustrative of the process employed in modern chemical industries.

The assay and furnace-room, on the first floor is equipped with a set of gas furnaces of the most modern type, for the operations of roasting, fusing, scorifying and cupelling employed in the dry assay of ores.

## The Department of

### PHYSICS AND ELECTRICAL ENGINEERING

is located in the south wing. There is a large lecture room, with a seating capacity for sixty-five students, adjoining the rooms in which the apparatus is stored in dust-proof cases. Several smaller rooms in the basement contain heavy piers of masonry, for work with sensitive galvanometers.

The following is a partial list of the more important pieces of apparatus in the Physical Laboratories:

#### IN MECHANICS, ETC.:

Large physical balance,	Compound pendulum,
Standard kilogram,	Break circuit chronograph,
Standard meter,	Powerful hydraulic press with
Geneva cathetometer,	attachments,
Dividing engine,	Rotary air pump and receivers.
Atwood's machine,	

#### IN ACOUSTICS.

A Mercadier radiophone,	Three sets of organ pipes,
Set of Köenig resonators,	Four sets of fine tuning forks,
Set of electrically-operated tuning forks by Köenig,	Edison phonograph,
A Scott-Phonautograph,	Apparatus for manometric obser-
Köenig's movable turning forks	vation of sound phenomea,
to draw compound curves on	Sets of vibrating rods, tubes and
smoked glass,	bells,
	Large double siren.

#### IN LIGHT:

Complete set of diffraction and interference apparatus by Soleil, Paris,	Two heliostats,
Sets of polarizing apparatus,	Four spectroscopes,
Sets of lenses and spherical mirrors,	A polarizing saccharimeter,
	Three projecting lanterns for gas or electric light, and 2,000 slides,

Two Rowland gratings, 14,000 lines to the inch,	Several cameras with lenses and attachments,
Sets of photographs of solar spectrum by Rowland,	A well equipped dark-room for photographic work.

## IN HEAT:

Melloni's apparatus for measuring radiation, absorption and reflection of heat, complete with prepared substances,	Standard thermometers, Air thermometer, Steam engine indicator, Calorimeters.
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## IN ELECTRICITY AND MAGNETISM:

An absolute electrometer,	Six bridges of different types,
Holtz machine and apparatus for illustrating static phenomena,	Historical set of motors showing evolution of the modern machine from the early forms of the reciprocating type,
Ten galvanometers of various types,	Standard resistance coils,
Ammeters and voltmeters,	Set of storage cells,
One 2,000 lb. electro magnet,	Complete X-ray outfit.
Four induction coils,	

In addition to the electrical apparatus in the Department of Physics, the equipment for the practical work in Electrical Engineering consists of engines, dynamos and instruments of commercial size, as follows:

A high frequency 1000 V, 33 K. W., composite wound, Wood alternator of the latest type, with exciter and a full set of switchboard instruments,	A power or foot lathe with wood turning tools, drills and hand tools for metals,
Several transformers of different capacity,	A set of wood working tools,
An Edison bipolar 15 K. W. 125 V, generator,	A set of tools for metal working,
A Thompson-Houston arc light machine with regulator and fifteen lamps,	Telegraph and telephone apparatus,
An Edison bipolar 3 K. W. 125 V, with special winding,	Standard portable bridge,
A Van Depoele compound wound dynamo,	Common portable bridge,
	Kohlrausch bridge for measuring battery resistance, etc.,
	Testing battery,
	D'Arsonval and common galvanometers,
	Resistance boxes, standard megohms, etc.,

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|---|---|
| A series wound dynamo with wrought iron field,  | A number of ammeters and voltmeters, mostly of the Weston type for direct current measurements,   |
| A number of small motors,   |   |
| A forty horse power high speed automatic engine,  | A set of inclined coil alternate current portable instruments; voltmeter, ammeter and wattmeter,  |
| A plug switchboard controlling all circuits,  |   |
| A calibrating lamp rack,  |   |
| A small engine belted to shafting to drive a plating dynamo and a buffer for cleaning and polishing work to be plated; solution tank, etc.,—in all a complete outfit for electrolytic work, | A case of marked samples of wire insulators, lamps, and other construction materials, Library of practical technical books of reference and files of leading periodicals. |

#### EQUIPMENT IN THE DEPARTMENTS OF BIOLOGY, GEOLOGY, AND MINERALOGY.

The Department of Biology, on the north side of the second floor of Science Hall, consists of three large classrooms and laboratories properly ventilated and lighted. There are also private laboratories set apart for post-graduate students. All the class-rooms are furnished with charts and models necessary in teaching the different courses. The arrangement of the windows is such that the rooms can be easily darkened for the use of a stereopticon and lantern slides on the subjects of Botany, Zoology, and Physiology.

The Laboratories are well equipped with compound and dissecting microscopes, and in each room there is a library of books pertaining to Biological subjects. The Botanical laboratory contains twenty-four compound microscopes and all the requisite accessories for work in vegetable histology and cryptogamic botany. The general laboratory of microscopy, histology and embryology is also supplied with compound microscopes and their necessary accessory apparatus and other equipments indispensable in the three courses mentioned above.

The Bacteriological Laboratory is completely equipped with compound microscopes, incubators, sterilizers, and all the improved apparatus employed in thorough and careful work in Bacteriology. Apart from the others is a laboratory of Photo-Micrography which contains a perfect photo-micrographic instrument with a complete set of accessory apparatus for experimentation, photographing microscopic objects, making lantern-slides, etc. A large and fully equipped dark-room adjoins this laboratory.

The south side of the second floor consists of class-rooms, and laboratories for the courses in Geology and Mineralogy. The laboratories adjoining the class-rooms are well equipped for work in blow-pipe analysis and assaying.

### THE MUSEUM,

connected with the departments described above, is well arranged for convenience of study. The Zoological collection on the second floor at present fills sixteen large cases and represents typical forms of all the orders and genera of vertebrate and invertebrate animals. A large collection of representative vertebrate skeletons has recently been added to this part of the Museum.

The Botanical collection, also on this floor, consists of two complete Herbaria, one of the United States, the other of Canada. There is also a second collection of the woods and fruits of the United States, almost complete.

The collections in Geology and Mineralogy occupy the first floor. These collections are arranged in a series of cases on each side of the building. In one series is a carefully classified collection of minerals and ores. The opposite series of cases contains a large Geological collection; some of the specimens here are of the rarest fossil remains of animal and plant life.



### ENGINEERING HALL.

The building set apart for the students of Engineering is situated directly south of Science Hall. It is a large three-story brick building, well lighted and heated and was carefully designed for the special purpose it serves. Of the three stories, the upper two are divided into lecture, recitation and drawing rooms. These are used exclusively by the Engineering students and are admirably arranged to meet their needs.

The wood shop, machine shop and blacksmith shop are on the first floor. The wood shop is supplied with modern work-benches fully equipped with the smaller tools necessary for carpentry, twelve lathes, for turning, a jig saw, a revolving planer, a circular saw, and a mortising machine,—the whole forming an adequate equipment for a thorough mastery of scroll work and pattern making. The machine shop contains two steam engines, one horizontal, the other vertical, and from these power is distributed to the various machines by a line of shafting running the entire length of the building. The latest improved lathes have been provided, nine in number, varying from a five inch swing in the smallest to a large engine lathe of ten inch swing, with sixteen foot bed. Two drill presses, a large planer, a shaping machine, and a Brown and Sharp milling machine complete the equipment, thus making the machine shop a model of its kind. The blacksmith shop has the usual complement for teaching forging, annealing, welding, and tool-making.

The southern portion of the second story of this Hall is used for the

### CIVIL ENGINEERING DEPARTMENT.

The equipment of this department is sufficient for all the practice and exercises in the field necessary to illustrate and teach the practical methods of engineering. The instru-



mental outfit consists of one surveyor's transit, one engineer's transit, with level and vertical circle attached to telescope, one engineer's wye level plane table with all the attachments, clinometers, chains, tapes, etc.

The entire upper floor of this building is given up to chemical laboratories. The Quantitative, Organic, Pharmaceutical, and Elementary Chemistry laboratories are in this story. Each laboratory is provided with ample hood accommodations, and desk is furnished with water, gas and suction. The balance room adjoining contains assay and analytical balances, sensitive to one ten-thousandth of a gramme. The Quantitative laboratory is fully equipped with apparatus for work in gas analysis, organic analysis and with apparatus for "Boiling-Point and Freezing-Point Determinations."

#### SORIN HALL.

This building is 144 feet in length, with two wings 112 feet in depth. It has a basement and three high stories. The building contains 101 private rooms for advanced students. These rooms are furnished and students of the Senior or Junior classes of any of the Collegiate Courses are not required to pay rent. On the first floor there is a chapel, a law lecture-room and a law library. The building is lighted with electricity and heated with steam. In the basement are a recreation room and bath rooms.

#### CORBY HALL.

Corby Hall is a second residence building. It has three stories and a basement, and it is 240 feet in width. There are 125 private rooms for students, with recreation-rooms and a chapel. The building is lighted with electricity and gas and heated with steam. For room-rent and care of the room a fee is charged.

### THE OBSERVATORY.

This building has a revolving dome with an equatorial telescope to which the students of Astronomy have access. The transit-room and the computing-room contain the smaller instruments and the works of reference.

### THE INFIRMARY.

This building is 200 feet by 45 feet in ground measurement and three stories in height. The rooms in this building are for the use of students during illness. The sick are nursed by Sisters of the Holy Cross, and the University physician visits them daily.

### THE GYMNASIUM.

The old gymnasium was found unsuitable for the needs of the University and a new building has replaced it. The new gymnasium has a track-hall 102 feet by 156 feet on the ground and 25 feet high. This contains the baseball net, and is used also for basketball, and military drill. There is a gymnastic room 100 feet by 36 feet, furnished with new apparatus, and below that a room of the same size, containing baths, dressing-rooms, office, and rubbing-room. The entire building is 227 feet in dimensions.

The Cartier Field is an enclosed field for athletic games. There is a prominent grand stand near the baseball diamond and the cinder tracks, and a portable stand near the football rectangle. The field contains ten acres of ground, and it is a gift to the University from Mr. Warren A. Cartier, C. E., of the class of '87.

### OTHER BUILDINGS.

There is a number of other large buildings connected with the University; of these the principal are; Saint Joseph's Hall Holy Cross Hall, the Community House, the Presbytery, and Saint Edward's Hall.

## DISCIPLINE.

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Official bi-monthly reports of each student's class standing will be sent to parents and guardians.

The Faculty maintains that an education which gives little attention to the development of the moral part of a youth's character is pernicious, and that it is impossible to bring about this development where students are granted absolute relaxation from all Faculty government while outside the class-room. A young man must learn obedience to law by the actual practice of obedience, not by mere theoretical appeals to honor and a non-existent virtue of obedience.

Moreover, the quiet and concentration of mind that are needed for collegiate work are not obtainable except when discipline exists.

Therefore the following regulations, shown to be salutary by experience, are enforced at the Univery:

1. No student shall leave the University grounds without permission from the President or the person delegated to represent him.

2. *Leave of absence will not be granted to students during the term time, except in cases of urgent necessity. There is no Vacation at Easter.*

3. Students are required to report at the University immediately after arriving at South Bend. This rule is binding not only at the beginning of the scholastic year,

but at all other times when leave of absense has been granted. Unnecessary delay in South Bend is looked upon as a serious violation of rule.

4. *Flagrant disobedience to authority, cheating in examinations, the use of intoxicating liquors, immorality, the use of profane and obscene language and unauthorized absence from the college limits* are among the causes for expulsion. In a case of suspension or expulsion for such offences, *no fees will be returned.*

5. No branch of study will be taken up or discontinued without the consent of the Director of Studies.

6. The use of tobacco is forbidden except to those students of Sorin, Corby and Brownson Halls that have received from their parents written permission to use tobacco.

7. *While students of all religious denominations are received into the University, it is nevertheless a strictly Catholic institution, and all students are required to attend divine service in the College Church at stated times.*

8. The use of intoxicating liquor is strictly prohibited.

9. To guard against all clandestine and improper correspondence, the President reserves the right to supervise letters to and from students.

10. Undue attention to athletics at the expense of study will not be permitted, but students are expected to take part in outdoor sports and other games.

11. A limited number of athletic contests is permitted with college organizations from without.

12. All athletic associations of the students are strictly forbidden to countenance anything that savors of professionalism.

13. Continued violation of regulations in Sorin and Corby Hall's leads to forfeiture of rooms.

14. All athletics will be governed by a Faculty Board of Control in conjunction with the Students' Committee. The President of the University and members of the Faculty will compose the Administrative Board, and reserve the right of a final determination of all questions concerning athletics. The Students' Committee will represent the student body as heretofore. The Faculty Board will determine the amateur standing of the members of the athletic teams, and apportion the finances. The President of the University, who is Chairman of the Faculty Board, will keep in close touch with all departments of athletics through the Physical Director who shall be responsible to the President only.

By this means indiscreet and unconsidered actions of the students will be checked and athletics put on an equal footing with those of other universities.

#### LECTURES AND CONCERTS.

Each winter eminent men are invited to lecture before the students. Concerts are also given monthly by organizations from without.

## MEDALS AND HONORS.

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**The Quan Gold Medal** is awarded yearly to the student in the Senior Class of the Classical Course that has the highest average rate over 80 per centum.

**The Meehan Gold Medal**, founded by Mrs. J. Meehan, of Covington, Ky., is awarded to a Senior student in the English or Classical Course for an English Essay. This medal is awarded only when the best essay has attained a fixed standard.

**The Ellsworth C. Hughes Medal**, presented by Mr. A. Hughes, Denver, Colorado, for the best record in Mathematics.

**The Breen Gold Medal**, founded by Mr. William P. Breen, of Fort Wayne, is awarded for Oratory.

**The Rademacher Gold Medal**, founded by the Bishop of Fort Wayne, is awarded to the student of Brownson Hall having the highest average in Christian Doctrine.

**The Barry Medal**, founded by Mr. P. T. Barry, of Chicago, is awarded in Brownson Hall for Elocution.

**The Mason Medal**, presented by Mr. George Mason, of Chicago, for the student of Carroll Hall having the best record for the Scholastic year.

First Honors are awarded to students of Sorin and Brownson Halls that have maintained throughout the year an average of at least 90 per centum for class-work and observance of regulations. A first-honor man for the first year receives a diploma, the second year a gold medal. The medal may be received also during the succeeding year of the course.

Expenses.



## EXPENSES.

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Matriculation Fee (payable on first entrance), . . . .	\$ 10.00
BOARD, TUITION, (Latin, Greek and Modern Languages, included) Lodging, Washing, and Mending of Linens, per Session of nearly ten Months, . . . . .	300.00

### PAYABLE IN ADVANCE, as follows:

On entrance in September, . . . . .	\$200.00
January 15th, . . . . .	\$100.00

The charge of \$300 covers the tuition fee, which is fixed at \$100 per Scholastic Year. This latter sum is accepted as an entirety for tuition during the Scholastic Year, and not to be refunded in whole or in part if the student be dismissed for wilful infraction of the fundamental rules and regulations herein stated and hereby brought to his notice; and so likewise in the event of his leaving and absenting himself from the University at any time or for any cause without proper notice and permission. However, an exception is made if it seems to be expedient for him to go to his home because of severe or protracted illness. Degrees will not be conferred on any student whose account with the University has not been settled.

There is no reduction for students that come late in September, nor for those that return late in January.

### SPECIAL EXPENSES.—PAYABLE IN ADVANCE.

#### PRIVATE ROOMS:—

Sorin Hall, Seniors and Juniors Free.	
Sophomores and Freshmen, . . . . .	\$50.00
Corby Hall, . . . . .	\$80.00

While students, as a rule, are advised to confine themselves to the regular studies of the course they have entered, any of the following may be taken at the rate mentioned per Scholastic Year. The charges will be *pro rata* for any portion of the year.

Instrumental Music—Lessons	Telegraphy.....	\$25.00
on Piano and use of	Typewriting—Full Course,	
Instrument.....	(20 lessons) .....	\$ 5.00
Use of Piano for advanced	Phonography.....	\$25.00
Students.....	Practical Mechanics.....	\$30.00
		\$30.00

Lessons on Violin, Guitar,	Artistic drawing.....	\$25.00
Flute, Cornet, Clarinet	Military Uniform.....	
and Mandolin.....	Applied Electricity.....	\$40 00
Use of each Instrument....	Special Lecture and Concert	
Vocal Culture.....	Course.....	\$ 3.00
Elocution—Special Course	Gymnastics — Full Course	
Use of Library.....	(20 lessons) ...	\$ 5.00
"Scholastic," College paper		\$ 1.50

For Laboratory Fees in Regular Courses see pages 68, 108, 111, 114.

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## GRADUATION FEE.

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For all Courses leading to a degree, \$10; Commercial Course, \$5.

### REMARKS.

The entrance fee, cost of Books, Music and Laboratory fees, etc., are required with first payment.

Remittances should be made by draft, postoffice money order or express, payable to the order of the President.

Checks on local banks are not desirable, and exchange will be charged in all cases.

Term bills and other accounts are subject to sight draft if not paid within ten days after they have been rendered.

*Brownson, Sorin, Corby and Carroll Halls are closed during the months of July and August.*

In consequence of benefactions lately received by the University, a limited number of students aspiring to the ecclesiastical state can be received at special rates. Fuller information can be obtained by addressing the President.

The year 1900-1901 will open on Tuesday, September 4th.

# Courses of Instruction.

## COURSES IN PHILOSOPHY.



## I.

(a) **Psychology of the Senses and Nervous System**—This course is a fairly comprehensive treatment of the physical basis of consciousness.

(b) **Empirical Psychology**—Psycho-physical methods and results.

(c) **Rational Psychology**—The problems of the mind Nature, origin, and destiny of the soul.

[*One term: Lectures four hours a week; student discussions one hour a week.*]

## II.

(a) **The Theory of Knowledge**—A study of the Scholastic doctrine in relation to the teachings of Descartes, Locke, Hume, Kant, Hamilton and Spencer.

[*This course is intended to be an introduction to Logic and General Metaphysics, and will be given at the beginning of the year during the time prescribed for these studies.*]

(b) **Logic**—An examination of the various logical processes and of the methods employed in scientific investigation.

[*Two hours a week for one year.*]

(c) **General Metaphysics**—Transcendental concepts; their value in different systems of philosophy.

[*Two hours a week for one term.*]

(d) **Cosmology**—The fundamental concepts of the Natural Sciences and their place in Thomistic Philosophy, Pantheism, Monism, and Evolutionism.

*[One hour a week for one term.]*

(e) **Theodicy**—The knowableness of God; His attributes; His presence in the Universe.

*(One hour a week for one term.)*

(f) **Student Discussions**—Once a week throughout the year students will be required to read and discuss papers on various subjects in the field of philosophical inquiry.

### III.

**Principles of Ethics**—(*Q. 1.*) Man's last End and Happiness; the Purpose of Man in this Life. (*Q. 2.*) Human Acts; Responsibility; Merit; Obstacles to Human Acts. (*Q. 3.*) Origin of Morality; Hedonism; Altruism; Sympathy; Essential Difference between Good and Evil; the Constituents of Morality; the Eternal Law. (*Q. 4.*) The Natural Moral Law; its Existence and Characters; Evolution. (*Q. 5.*) The Positive Law. (*Q. 6.*) On Conscience; Good Faith; Doubtful Conscience and Reflex Principles. (*Q. 7.*) Passions in Practical Life; their Classification; their Imputability. (*Q. 8.*) The Moral Virtues; Stoicism; Epicurism; Christianity.

*[Five hours a week for one term]*

### IV.

(a) **Individual Duties**—Notions of Right and Duty. (*Q. 1.*) The Duty of Man to God; Necessity of External and Public Worship; Obligation of Prayer; the fact of Sacrifice. (*Q. 2.*) The Duty of Man to Himself; Culture of the Intelligence, the Will, the Imagination, the Memory; Care of the Body; Suicide essentially Unlawful. (*Q. 3.*) The Duty of Man to his Fellowmen; on Truthfulness and

Lying; Homicide and Self-Defence; on Duelling; on Private Ownership; Socialism; Communism; Single Tax; on the Right to Honor and Reputation; on Contracts and Usury.

(b) **Social Duties**—(*Q. 1.*) The Domestic Society and Marriage; Monogamy; Polygamy and Divorce; Relations between Parents and Children. (*Q. 2.*) Education: the Part of the Parents, the Church and the State. (*Q. 3.*) On Slavery in Ancient and Modern Times; Duties of Masters and Servants. (*Q. 4.*) On Capital and Labor.

(c) **Sociology**—Necessity of a Public Society; the City. (*Q. 1.*) Origin of the Civil and Political Organization; Theories of Hobbes and J. J. Rousseau; Source of Authority in Human Society. (*Q. 2.*) On the Divine Right of Kings; the Absolute Sovereignty of the People; the Reasonable System. (*Q. 3.*) The different Forms of Government; the Primitive Polity; the best Form of Government; Opinions of O. A. Brownson. (*Q. 4.*) On Modern Democracy; the Position of the Church; the Usurpation and Transfer of the Supreme Power; on the Government *de Facto*. (*Q. 5.*) On Despotism; is it Lawful to Resist a Tyrant? Theory of St. Thomas and Machiavelli on Government. (*Q. 6.*) The Distinction of the three Social Powers; Parliamentary and Representative Government. (*Q. 7.*) Qualities of a good Ruler; the Question of the Poor. (*Q. 8.*) Public Liberties; Freedom of the Press and of Conscience; the Right of the Sword; on War and Treaties. (*Q. 9.*) The International Law. (*Q. 10.*) Civilization. (*Q. 11.*) Church and State.

(d) **Government of the United States**\*—History of the Constitution; the Legislative Department of the U. S.; the Executive Department of the U. S.; the President and the

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\* This sketch is drawn according to the valuable ideas contained in "The American Republic," by Dr. O. A. Brownson, and "The American Commonwealth," by Mr. Bryce.

Cabinet; the Judicial Department of the U. S.; the Supreme Court; the Rights of the States and the United States; Jury, Suffrage and Elections; Ballot Systems; Parties and Party Machinery; Patriotism and Religion.

*This Course is for Classical Students.*

(e) History of Philosophy\*—Schools and Systems.—*Ancient Philosophy*: Pythagoras.—Anaxagoras—The Sophists and Socrates.—Plato and Aristotle.—Epicurus,—Zeno—Pyrrho.—Eclecticism and Neo-Platonism.—Cicero and Seneca. *Philosophy of the Middle Ages*—Christian Platonism: St. Augustine.—Scholasticism: St. Thomas of Aquin.—*Renaissance* and modern Philosophy: Neo-Platonism.—Francis Bacon—Thomas Hobbes—Descartes—Spinoza—Leibnitz—John Locke. Materialism.—David Hume.—Kant and his disciples.—Darwin and Monism.—A. Comte and Positivism.—Herbert Spencer—F. Huxley—Agnosticism and Evolution.

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\* The text book used is "History of Philosophy" by Alfred Weber.



## COURSES IN GREEK.



## I.

**Homer**—Odyssey.

**Xenophon**—Memorabilia. First Two Books. Accidental forms and Syntactical relations are constantly brought to the student's attention to fix in his mind the principles of Grammar.

**Prose Composition**—The main purpose of this exercise is to teach the student to write Greek according to the spirit of the Greek language. Attention is constantly directed to the difference in form of expression between the English and the Greek.

**Grammar**—Syntax reviewed. *Goodwin*.

[*Five hours a week for one term.*]

## II.

**Homer**—Odyssey.

**Lysias**—Orations, selected.

**St. John Chrysostom**—Eutropius.

**Prose Composition**—See Course I.

[*Five hours a week for one term.*]

## III.

**Homer**—Iliad. First and Fifth Books. Special study of the Homeric language and verse scansion. Grammatical and etymological explanations. Works of reference. Origin of the Homeric poems. General literary characteristics of the poems. Mythology. Homeric Theology.

**St. Gregory**—Macchabees.

Exercises in Prose Composition.

[*Five hours a week for one term.*]

## IV.

**Homer**—Iliad, Sixth Book, and Cursory Reading of entire work. Books of reference and Collateral Reading as in Course III.

**Thucydides**—First Book.

Exercises in Prose Composition.

*[Five hours a week for one term.]*

## V.

(a) **Demosthenes**—De Corona. Review of Political situation and historical facts in reference to the Oration. Review of Æschines' speech on the same subject, and continued reference to the same. Analytical comparisons. Constant attention is paid, throughout the courses, to the exchange of the form of Analytical Elements of the Greek for another more in harmony with the spirit of the English language. The student must be prepared to account for any form of Etymology and to explain any rule of Syntax that he meets in the text.

**Cursory Reading** of Homer's Odyssey. Homer's works considered as the foundation of faith or the Bible of Pagan Greece.

**Practical Exercises** embodying idiomatic expressions and constructions of the authors read.

*[Five hours a week for one term.]*

## VI.

**St. Basil**—De Profanis Scriptoribus. Literary appreciation of the 4th Century of the Christian Era, the Golden Age of Christian Literature. The Greek Fathers of the Church shown to be the peers of Demosthenes and Cicero in purity of language, sublimity of style and oratorical success. The end in view turns the scale in their favor. References made to Pagan authors quoted by St. Basil. The advantages of a

Classical Education in general, and of the study of Greek in particular are dwelled upon as a mental training and preparation for the literary and scientific professions.

**Sophocles**—*Œdipus Tyrannus*. Read with special reference to the economy of the Greek Drama, its origin in religion, its religious features, its moral, its metrical mechanism and its adaptability to the Modern Stage. Grecian costumes, Grecian stage and theatrical outfits. Digest of the Theban Legends.

**Short Prose Compositions**—Special attention is here given to the Greek element in the English language, which is casually observed in all the Courses.

**Elements of Greek Literature.**

*[Five hours a week for one term.]*

## VII.

**Plato**—*Apology* and *Crito*. In connection with this author enlargements are made upon Athenian life, Athenian jurisprudence, Athenian court proceedings. Socrates, a philosopher or a sophist? His friends and his enemies.

**Eurípides**—*Medea*, or *Iphigenia in Aulis*, with literary digest of the myths and legends touched upon in these dramas. The Greek Drama continued as in Course VI. Religious tendencies of Euripides.

**Píndar**—*Select Odes*. The public games of Greece. Reading at sight of Heyne's Greek notes on the Odes read in class.

**Exercises**—Modern Greek compared with the Ancient. Deviations in form and expression pointed out. Modern pronunciation discussed, but not adopted. Reading at sight of Professor's collections of Modern Greek Stories, and Anecdotes. The latter are reproduced in Ancient Greek.

**History of Greek Literature.***[Five hours a week for one term.]***VIII.**

**Cursory Reading** of the Greek Fathers of the Church. St. Basil—The Martyr Gordius. St. John Chrysostom—The Return of Bishop Flavian. St. Gregory Nazianzen—Funeral Oration of Cæsarius.

**Reading at Sight**—The Professor's Epitome of the New Testament.

**Sophocles**—Philoctetes or Antigone.

**Aristophanes**—Frogs or Clouds. Greek Comedy; its nature; its aim. Political Situation, Party Spirit, and work of Secret Societies in Athens during the Peloponnesian War. Religious and Philosophical Revolutions of the time. Conservatism of Æschylos and Sophocles as compared with the complaint spirit of Euripides. Aristophanes as opportune in the 19th Century as in his own days of enlightenment.

**Modern Greek**—Reading at sight of *Ἡ Μαυρὴ Ὠραϊότης*

**History of Greek Literature.**

*[Five hours a week for one term.]*

## COURSES IN LATIN.



## I.

**Cicero**—Select Letters. Orations.

**Latin Composition** based on Cicero's text.

**Virgil**—Æneid. First and Second books. The explanations cover peculiarities of Syntax, Figures, Mythology, Versification. Collateral reading is indicated to the students.

**Prosody**—Ordinary Rules of Prosody. Practical Work.

*[Five hours a week for one term.]*

## II.

**Cicero**—De Senectute or De Amicitia.

**Latin Composition** based on Cicero.

**Virgil**—Æneid. Fourth Book with complete explanations. Fifth and Sixth Books. Collateral Reading indicated to the student.

Practice in Latin Conversation.

**Prosody**—Completed.

*[Five hours a week for one term.]*

## III.

**Livy**—Book XXI.

**Latin Composition** based on Livy.

**Horace**—Odes and Epodes. The explanations include the study of the Metrical Systems, Peculiarities of Style, Plan of the Composition, Comparison with Odes of a similar nature. Collateral reading indicated to the student.

Practice in Latin Conversation.

**Versification**—Weekly exercises. Original Latin Composition.

*[Five hours a week for one term.]*

## IV.

**Livy**—Book XXII.

**Latin Composition** based on Livy.

**Cicero**—De Oratore, First Book.

**Horace**—Odes and Epodes continued. See Course III.

Practice in Latin Conversation.

**Versification**—Original exercises. Original Latin Composition.

*[Five hours a week for one term.]*

## V.

**Livy**—Roman History, First Book. In the reading of the text particular attention is called to the rules of Syntax—roots and derivation of words—and to Ancient History, Geography and Mythology.

Latin Composition twice a week, either paraphrases or original. Short fables and stories.

**Horace**—Epistola ad Pisones translated, analyzed and criticized from a Philological and Literary standpoint.

Three select Satires, First Book.

**Ancient Literature**—Historians and Lyric Poets: their lives, their works, their genius.

*[Five hours a week for one term.]*

## VI.

**Tacitus**—Agricola and Germania. While reading the text a comparison is made with the private and public manners of modern nations.

**Terence**—Andria. Sight reading.

**Horace**—The Literary Epistles and a few of the Moral Satires.

Weekly practice in written Composition, Latin Conversation and Versification.

**Ancient Literature**—Dramatists of Greece and Rome compared and discussed.

*[Five hours a week for one term.]*

## VII.

**Quintilian**—De Institutione Oratoria, Books Tenth and Twelvth. Translation. Explanation embraces a literary criticism of Grecian and Roman Orators, and practical remarks on Latin Idioms and the fine arts of Antiquity.

Short Orations or Dissertations, and practical Conversations take place weekly.

**Plautus**—Captivi. The study of the play gives a full knowledge of the Characters, the Plot, and the Style, the archaic Forms, and the Constructions peculiar to the author.

**Ancient Literature**—Orators, especially Demosthenes and Cicero.

*[Five hours a week for one term.]*

## VIII.

**Cicero**—De Officiis. Partly sight-reading. Besides the study of the work from a philological standpoint, the student is made acquainted with the main systems of Grecian Philosophy, and continual reference is made to Course III. in Philosophy.

Oratorical and Philosophical Compositions alternate weekly. Latin Conversation on general topics.

**Lucretius**—De Natura Rerum. Select passages. Synopsis of the poem. Statement and refutation of erroneous philosophical systems of antiquity. Analogy with the errors of our day. Style of the writer.

**Ancient Literature**—Philosophers, particularly Socrates, Plato and Aristotle, Cicero and Seneca.

*[Five hours a week for one term.]*



## COURSES IN ENGLISH.



## I.

(a) **Rhetoric**—Detailed study of good use. Barbarisms, Improprieties and Solecisms. Clearness, Force and Ease, as effected by Choice, Number and Arrangement of words. Detailed study of sentences, paragraphs and whole compositions, with critical analysis of selected models. Analytical study of Descriptive Writing (scientific and artistic). Narrative Writing, with special reference to the Short Story. Expository Composition, with special reference to the Essay. Argumentation; burden of proof; presumption; methods; forms and arrangement of argument; persuasion. During a large part of the year the student is required to write a daily theme. The text-book in use is Hill's *Principles of Rhetoric*, supplemented by lectures and notes by the Professor.

(b) **Oratorical Composition**—Invention: proofs, manners, passions, topics; disposition; parts of the discourse; oratorical amplification; briefs; analysis of orations. Elements of Logic with reference to Oratory.

(c) **Readings in Class**—Spencer's *Philosophy of Style*, Gates' *Selections from Newman*. British and American Orations.

[Five hours a week for two terms.]

## II.

[One theme a week in all classes below.]

(a) **English Prosody**—Scansion, the old method and the method by musical notation; rhythmical units—quantity, accent, the phrase; blank verse, cadences, alliteration;

metre, rime, stanzas, French forms, the sonnets, and other lyric forms.

**b Dramatic Analysis**—The parts of a Tragedy: introductions, scenic passages, rising actions, climaxes, tragic incidents, falling actions, catastrophes, forces, plots, underplots, characterization, nemesis, values, unity, probability, completeness, etc. Comedy. Application to Shaksperian plays and to the modern drama.

**(c) Shakspeare**—Reading with literary and dramatic analysis of *Macbeth*, *King John*, *Julius Cæsar*, *King Richard III.*, *Coriolanus*, *As You Like It*, *Twelfth Night*, *Much Ado About Nothing*. Hudson's and the "Arden" texts are used and the entire play is read in each case.

**(d) The History of English Literature up to Shakspeare**—*A Handbook of English Literature*, by Austin Dobson, and Ward's *English Poets* are used to direct this course.

[Five hours a week for two terms.]

### III.

**(a) The Laws of the Epic**, of Prose Fiction, of the Lyric and the Essay. Critical application of the laws to models.

**(b) Shakspeare**—Reading, etc., as in Course II. *c*, of *A Winter's Tale*, *Romeo and Juliet*, *King Henry IV.*, Part I., *King Henry IV.*, Part II., *King Henry V.*, *A Midsummer Night's Dream*, *Antony and Cleopatra*.

**(c) History of English Literature** from Shakspeare to the nineteenth century. Models. Dobson and Ward used as in Course II. *d*.

[Five hours a week for two terms.]

### IV.

**(a) Shakspeare**—Reading, etc., as in Course II. *c*, of *King Lear*, *Hamlet*, *Othello*, *The Tempest*, *The Merchant of Venice*, *Cymbeline*, *King Henry VIII.*, *King Richard II.*

(b) **The Leading Poets and Prose Writers of the Nineteenth Century.** Lectures.

(c) **Old English**—An elementary course in Anglo-Saxon grammar and reading. (This division of Course IV. is elective.)

*[Four hours a week for two terms.]*

## V.

**Special Course in Theme Writing for Engineering and Scientific students.**

*[One hour a week for two terms.]*

## Courses in Elocution and Oratory.



### I.

**Readings and Declamations**—This course is designed to correct defects in pronunciation and emphasis. Each student will be required to give two declamations.

*[Two hours a week for first term.]*

### II.

**Continuation of Course I.**—Each student will be required to give three declamations.

*[Two hours a week for second term.]*

### III.

**Practical Elocution**—Exercises in breathing, voice-culture, and action. The principles pronunciation and emphasis and their application in the reading of selections. Text-book, Fulton and Trueblood's *Practical Elocution*.

*[Two hours a week for first term.]*

## IV.

**Continuation of Course III.**—Further exercises in breathing, voice-culture, and action. Quality, Force, Pitch, and Time. Minute speeches and declamations. Lectures on the principles of action. Text-book, Fulton and Trueblood's *Practical Elocution*.

[*Two hours a week for second term.*]

## V.

**Oral Discussions**—The application of Formal Logic to debating. Analysis of selected argumentative speeches, and the preparation of briefs. Courses III. and IV. and a course in Logic are required for admission to this course. It is limited to 24 students.

[*Two hours a week for first term.*]

## VI.

**Shaksperian Reading**—The critical and artistic reading of two of Shakspeare's plays accompanied with stage action. The students present the play by scenes before the class. Courses III. and IV. are required for admission to this course. It is limited to 24 students, and alternates with course VII. below.

[*Two hours a week for second term.*]

## VII.

**Oratory**—A study of the great orators of ancient and modern times. Each student is required to write and deliver a biographical oration on one of the great orators. Lectures on methods of public address. Courses III. and IV. above and course I. in English are required for admission to this course. It is limited to 24 students and alternates with course VI. above.

[*Two hours a week for second term.*]

## VIII.

**Assembly Work**—This course is designed to supplement the other courses in this department. It consists of debates, short orations, minute speeches, declamations, impromptus and drill work in parliamentary law. Wednesday from 1 to 3. One hour credit.

*[Throughout the year.]*

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## COURSES IN HISTORY.



## I.

## ANCIENT HISTORY.

(a) **Ancient Greece**—To the conquest by Rome of the Hellenic world. Readings, and examinations on required texts. This course is given in an alternate year with Course I. (b).

*[Four hours a week for one year.]*

(b) **Ancient Rome** to the barbarian invasions. Readings and examinations on required texts. This course is given in an alternate year with Course I. (a).

In both courses, the student is required to become familiar with the institutions of the ancient world, and to study the same in De Coulanges' *The Ancient City*.

*[Four hours a week for one year.]*

## II.

## MEDIAEVAL AND MODERN HISTORY.

(a) **The History of the Middle Ages** from the invasion of the barbarians, and the history of the periods of the Renaissance and the Reformation to 1603. Readings and examinations on required texts.

*[Three hours a week for one year.]*

(b) **The General History of Europe** from the beginning of the 17th century to the present time. Readings and examinations on required texts.

[*Three hours a week for one year.*]

### III.

#### ENGLISH HISTORY.

**The history of the British Isles to the Revolution of 1689—**Readings and examinations on required texts. The student is required to obtain by directed reading and examinations a special knowledge of the development of the political institutions of Great Britain, using Feilden's *Constitutional History*.

[*Four hours a week for one year.*]

### IV.

#### AMERICAN HISTORY.

(a) **American History from its beginning to 1763—**Readings and examinations on required texts.

[*One hour a week for one year.*]

(b) **American History from 1763 to the present time—**Readings, lectures and examinations. There is first given by lectures an outline of the political condition of the Colonies under the Crown, the causes leading up to the Revolution of 1776, the Revolution, the political status of the States after Independence, the Confederation of 1781, the causes leading to the formation of the Constitution, and the Constitutional Convention. This is followed by a thorough treatment of the political history of the United States since 1789, using as an outline text, Johnson's *American Politics*.

[*Three hours a week for one year.*]

## COURSES IN POLITICAL SCIENCE.



(a)

## ECONOMICS.

I. **The Elements of Economics, viz.:**—Land, Human Exertions and Capital; Value, Money and Credit; Rent, Interest, Profit and Wages; and Population and Consumption. The text-book used is Walker's *Manual of Political Economy*.

[*Four hours a week for five months.*]

II. **Industrial History** and the history of Economic Thought. Readings, lectures and examinations on required texts.

[*Three hours a week for one year.*]

III. **Money, Credit and Banking**, with special treatment of the monetary experience of the United States. Lectures, readings, and examinations on required texts.

[*Three hours a week for five months.*]

IV. **Distribution**—A course covering the Land and Labor Questions and Socialism. Lectures, readings and examinations on required texts.

[*Three hours a week for five months.*]

(b)

## POLITICS.

V. **The Elements of Politics**—Lectures and examinations on required texts.

[*Two hours a week for five months.*]

VI. **The American Constitution and Political Institutions.**



Lectures, readings, and examinations on required texts.

[*Two hours a week for five months.*]

VII. **Jurisprudence**—A course covering (a) The outlines of the Science of Law, (b) The elements of International Law, and (c) Lectures on selected topics of Roman and Canon Law. Lectures, readings and examinations on required texts.

[*Two hours a week for one year.*]

(c)

#### SOCIAL SCIENCE.

VIII. **The Elements of Sociology**—Lectures, readings and examinations on required texts.

[*Two hours a week for five months.*]

## COURSE IN ROMANCE LANGUAGES.



This Course includes the study of French, Spanish, Italian, Portuguese, Old French, Provençal.

Its principal aim is to impart an accurate reading knowledge of literary works written in these languages. In the study, however, of Old French and Provençal special attention will be paid to Philology.

#### FRENCH COURSES.

##### I.

Houghton's *French by Reading*. *Un Cas de Conscience*.  
Super's *Reading from French History*.

[*Two hours a week.*]

## II.

French Composition. L'Avare. Le Voyage de M. Perichon. Le Roi des Montagnes. Picciola. Zola's Le Rêve.

[*Two hours a week.*]

## III.

La Poudre aux Yeux. Athalie. Hernani. Les Confessions d'un Ouvrier. Le Barbier de Séville. Le Malade Imaginaire. Les Fourberies de Scapin. Pourceaugnac. Les Fâcheux. L'Amour Médecin. Le Misanthrope. Cinna. Polyeucte.

[*Two hours a week.*]

N. B.—The books used are not necessarily the same every year.

## SPANISH COURSE.

A two years' course. Besides the reading of Modern Authors the masterpieces of Calderon de la Barca, Lope de Vega, Cervantes, etc., will be particularly studied. An optional course of Old Spanish preceded by the philology of the language, enabling the students to better understand the masterpieces of Old Spanish is also offered.

## ITALIAN COURSE.

A two years' course. The chief work of this course is a critical study of Dante's Divina Commedia. Reading from Tasso, Petrarca, Ariosto's Satires, Manzoni, etc.

## PORTUGUESE COURSE.

One year course. Os Lusíadas will be specially studied.

## OLD FRENCH.

Special attention will be paid to the laws underlying the formation of the French language from the popular Latin. For this purpose a work like Brachet's *Grammaire*

*Historique* will be studied. It is under this point of view that Old French authors will be read, especially *La Chanson de Roland*.

### PROVENÇAL COURSE.

Language and literature, with reading from the works of the Troubadours.



### REMARK.

With the exception of French, no one will be accepted for these courses unless he can satisfy the Professor of his ability to read Latin at sight.



## COURSES IN GERMAN.



### I.

**Grammar**—*Joynes-Meissner*. Deutsches Lesebuch, *Bone*.

**Themes**—Original and imitation work.

[*Three hours a week.*]

### II.

**Special Course** for students in the English and Scientific Courses.

**Grammar**—*Joynes-Meissner*.

**Readings** from scientific and literary works.

[*Three hours a week*]

### III.

**Readings** from scientific and literary works.

[*Three hours a week.*]

## COURSES IN PURE MATHEMATICS.



### I.

**Algebra**—This course includes a study of the binomial theorem, the theory of logarithms, choice, chance, variables and limits, series, determinants. Then follows a thorough study of the general properties and solution of equations, embracing the subjects of derivatives, transformation, detached coefficients, surd and imaginary roots, incommensurable roots, limits of roots, biquadratic equations; Des Cartes' and Cardan's rules; Sturm's theorem; Horner's method; roots of complex number and trigonometric solution of cubic equations.

*[Five hours a week for one term.]*

### II.

**Trigonometry, Plane and Spherical**—Development of general formulæ; functions of a single angle; functions of related angles; functions of sums and differences; functions of double angles and half angles; functions of multiple angles; changing the product of functions into the sum of functions, and the sum of functions into the product of functions; circular functions; development of functions; transformations; solution of triangles; construction and use of tables. The preceding work embraces the general topics studied in the course of plane trigonometry. Additional exercises involving application of theoretical principles are added by the instructor.

In Spherical Trigonometry are studied:—General properties of spherical triangles; solution of right and oblique spherical triangles; special methods involving application of Napier's rules and analogies, and Gauss's equations;

determination of species; spherical excess; area of spherical triangles; miscellaneous applications; astronomical applications. This Course is supplemented by many practical problems and exercises.

*[Plane Trigonometry, five hours a week for twelve weeks.  
Spherical Trigonometry, five hours a week for eight weeks.]*

### III.

**Analytic Geometry**—This Course includes a study of the point and right line; conic sections, their equations and properties; discussion of the general equation of the second degree containing two variables; higher plane curves; equations of the third degree; different systems of coordinates; transformation of coordinates; spirals; an elementary course in geometry of three dimensions, embracing the point, straight line, plane and surfaces of revolution; transformation of coordinates; quadric surfaces and supplementary propositions.

*[Five hours a week for one term.]*

### IV.

**Calculus, Differential**—This Course, as also Course V., is designed to meet the requirements of Engineering students. It includes a study of the methods for the differentiation of algebraic, logarithmic and exponential, trigonometric, and inverse trigonometric functions; successive differentiation and differential coefficients; treatment of implicit and compound functions; expansion of functions; indeterminate forms; partial differential coefficients of the first order and of higher orders; direction of curvature; radius of curvature; envelopes; singular points of curves; maxima and minima of functions of one independent variable, and of several independent variables; tracing curves; differentials of arcs, plane areas, surfaces and volumes of revolution.

*[Five hours a week for one term.]*

## V.

**Calculus, Integral**—Integration of elementary forms and of rational fractions; integration by rationalization and by parts; successive integration; multiple integrals; definite integration and the constants of integration; integration between limits; disposing of the constant of integration; double integration applied to plane areas; rectification of plane curves; quadratures of plane areas and surfaces of revolution; surface and volume of any solid; intrinsic equation of a curve. This Course is supplemented by numerous exercises and examples.

[*Five hours a week for one term.*]

## VI.

**Elective Work**—The prescribed Courses in Pure Mathematics are I. to V. inclusive. The following advanced Courses are offered, based on standard authors. The textbooks are not necessarily the same every year. The number of students necessary to constitute a class in any one subject must be at least five.

(a) Higher Algebra, *Hall and Knight, Smith, Chrystal*.  
 (b) Advanced work in Trigonometry, *Todhunter, Lock*.  
 (c) Determinants, *Peck, Hanus, Muir*. (d) Theory of Equations, *Burnside and Panton*. (e) Differential Equations, Elementary Course, *Murray*. (f) Advanced Calculus, *Byerly, Todhunter, Williamson*. (g) Advanced Analytic Geometry, *Salmon*. (h) Analytic Geometry of Three Dimensions, *Aldis, Frost, Salmon*. (i) Quaternions *Hardy*, with *Kelland and Tait* as reference.

[*Three hours' recitation a week for one subject.*]



## COURSES IN APPLIED MATHEMATICS.



## I.

**Descriptive Geometry**—In this Course are considered problems on the point, right line, and plane; single curved, double curved, and warped surfaces; problems relating to tangent planes to single curved, double curved, and warped surfaces; intersection of surfaces by planes; tangencies; development of surfaces; spherical projections; orthographic, stereographic, globular, cylindrical, and conic projections; construction of maps; shades and shadows; linear perspective; isometric projections; theory and plates. Numerous practical problems and exercises requiring the application of the principles of Descriptive Geometry are added by the instructor.

*[Three hours a week for two terms.]*

## II.

**Surveying**—This Course comprises the whole theory of land surveying and levelling; the use and adjustment of the transit, compass, level, and plane table; methods of measuring; relocation of boundaries; supplying omissions; obstacles to measurement; computations; field notes and plots; laying out land; parting off land; dividing up land; Public Lands survey.

*[Five hours a week for one term.]*

## III.

**Surveying**—Field practice and application of theory; adjustments and use of instruments in the field; solution of problems in the field the theory of which is taught in the



class-room; practice in keeping field notes; computations and plots.

*[Four hours a week for the spring term.]*

#### IV.

**Higher Surveying**—This Course is a more complete treatment of the theory of surveying than Course II. and cannot be taken until the completion of that course. It treats of the adjustment, use, and care of all kinds of Engineering instruments; problems pertaining to solar attachment; topographical surveying with the transit and stadia; mining surveying; mining claims; survey of mines with shafts and drifts; determining positions of ends of tunnels, and depths below surface; theory of hydrographic and city surveying; geodetic surveying and levelling; measuring base lines; adjustments of angles, triangles, and quadrilaterals; latitude and azimuth; time and longitude; changing mean time into sidereal time and sidereal time to mean time.

*[Five hours a week for one term.]*

#### V.

**Surveying**—Exercises in the field in the adjustments and use of engineering instruments; stadia and plane table surveying in the field; levelling; practice in hydrographic surveying.

*[Four hours a week for the spring term.]*

#### VI.

**Railroad Surveying**—This Course comprises all the theory pertaining to reconnoissance and preliminary survey for a railroad; theory of maximum economy in grades and curves; location of curves by deflection angles and offsets; obstacles to location of curves; special problems in curves; theory of compound curves; turnouts and crossings; compound transition curves; cubic parabola; curving the rail on curves and

elevation of outer rail; easing grade on curves; vertical curves; earthwork and prismoidal formula; theory of excavation and embankment; correction in excavation on curves; cross-sectioning.

*[Five hours a week for one term.]*

## VII.

**Railroad Surveying**—Exercises in the field; staking out and running tangents, simple, compound and transition curves; execution on the ground of many problems previously treated theoretically; survey for a short line of railroad, levelling, cross-sectioning, and setting slope stakes; making profiles and maps; calculating the necessary excavations and embankments and cost of construction; culverts.

*[Four hours a week for one term.]*

## VIII.

**Analytic Mechanics**—The aim of this course is to prepare students of Engineering for the study of the courses of Applied Mechanics. The course comprises a study of the fundamental principles of Statics, Kinematics, and Kinetics. The subjects selected are studied with the object of thoroughly preparing the engineering students to pursue the technical and practical branches of their respective courses. Some of the topics considered in this course are: work, energy, conservation of energy, power, composition and resolution of forces, centre of gravity, centre of mass, moment of inertia, acceleration, dynamics of rigid bodies, laws of friction, etc.

*[Five hours a week for one term.]*

## IX.

**Mechanics of Materials**—This course is intended to meet the requirements of Engineering students, and to prepare

them by a study of the action and effect of forces on beams and structures to design economically and intelligently the parts entering into a completed structure. The course comprises a study, according to the latest and most approved methods, of tension and its effect on materials, compression, theories of flexure and rupture from transverse stress, shearing stress, transverse strength, beams of uniform resistance, various forms, and loaded in any manner; design and strength of beams and columns, effect of long continued strains, and repeated strains, factor of safety and working stresses, strength of pipes and cylinders, theory and practice of riveting, torsion, transmission of power by shafts, continuous girders, equations of curves of deflection, theorem of three moments, moment at any support, etc.

*[Five hours a week for one term.]*

## X.

**Bridges and Roofs**—This Course comprises a study of the different systems of trussed bridges and roof trusses, and the calculation of the strains produced when loaded in any manner, the weight of the structure and the effect of wind included. Both graphical and analytical methods are used. Besides the various systems of trussed bridges, which are studied in detail, the plate girders, suspension bridges, cantilever bridges, draw bridges, and roofs of various designs are given equal attention, the purpose being to familiarize the student with the different forms and to enable him to design and to estimate the cost of construction.

*[Three hours a week for one term.]*

## XI.

**Graphical Statics**—This Course teaches the determination of stresses in framed structures by the graphical method.

Shearing forces, bending moments, centres of gravity, and moments of inertia are graphically determined by the application of the principles of the force and equilibrium polygons; as also stresses in bridge and roof trusses; graphical treatment of the arch, symmetrical and unsymmetrical cases; graphical method for arch-ribs of hinged ends, and of fixed ends; stress diagrams; temperature stresses; braced arches; graphics applied to continuous girders. This Course is supplemented by full explanations, notes, examples, and problems.

*[Three hours a week for one term.]*

## XII.

**Engineering**—This Course is taken by students of Civil Engineering in the Senior Year, and teaches the principles of the science of Civil Engineering and the most approved methods of constructing engineering works, such as piers, abutments, foundations, coffer dams, reservoir walls; instruction as to the types of structures suitable for different localities; economy of construction and framing; properties of building materials, as wood, stone, cement, brick, iron; methods of testing, methods of preparation, preservation and cost; construction of masonry arches, tunnels, sewers, highways, and city streets; discussion of framed structures of different types; river and harbor improvements; canals; seacoast defenses.

*[Five hours a week for two terms.]*

## XIII.

**Sanitary Engineering**—This Course is a study of the principles and methods of drainage and disposal of sewage in populous districts; shape, material and calculation of sewers; catch basins, flushing, and ventilation; separate and combined systems compared; pollution of rivers; chemical precipitation; results and cost of purification; general munic-

ipal and domestic sanitation; inspection of neighboring works.

*[Two hours a week for one term.]*

#### XIV.

**Stereotomy**—This Course comprises a study of the application of the principles of Descriptive Geometry to the determination of the forms and sizes of the stones used in the construction of the different classes of arches and masonry structures. This Course is given by lectures in the Drawing Room, explaining the construction of templets, and use of directing instruments; also explanations of methods of drawing plans, elevations, and developments of oblique arches, wing walls and the like. A certain number of plates and drawings is required, illustrating the methods of performing practical work.

*[Two hours a week for one term.]*

#### XV.

**Hydroméchanics**—This Course is a thorough study of the theory of hydrostatics, hydraulics, and hydrodynamics, to which are added many practical exercises. The subjects considered are the transmissions of pressures; center of pressures; velocity of flow from orifices of various shapes; fluid friction; Bernoulli's theorem with friction; Chezy's formula; Kutter's formula; flow over weirs, and through tubes; flow in pipes; loss of head in friction and other losses; flow in conduits, canals, and rivers; velocities in cross section; methods of gauging the flow; measurement of water power; dynamic pressure of flowing water; designing of water works and standpipes; hydraulic motors and relative merits; dynamics of gaseous fluids; flow through orifices by water formula; with isothermal expansion; with adiabatic expansion.

*[Five hours a week for one term.]*

## XVI.

**Geodesy**—This is an elementary Course prescribed for Civil Engineering students in the Junior Year, and comprises a study of the instruments and methods of observation; base measurements and field work of the triangulation; method of least squares, elementary course; calculation of the triangulation, and theory of probable errors; geodetic latitudes, longitudes, and azimuths. This is followed by a brief discussion of the figure of the earth.

*[Four hours a week for one term.]*



## COURSE IN ASTRONOMY.



### I.

**Astronomy**—Descriptive and Practical. This Course comprises a study of astronomical instruments, their use and adjustment, and methods of observation; problems of finding time, latitude, and longitude; observatory practice; methods of finding the form, size, mass, and density of the earth; earth's orbital motion; equation of time; precession, nutation, aberration, and parallax; general description of the sun; description of eclipses and computation; planetary orbits and computation; problem of two bodies; problem of three bodies; disturbing forces; methods of determining the diameters, masses, densities, times of rotation of the planets; determination of the sun's horizontal parallax and distance, various methods; description of comets, meteors, nebulae, and fixed stars; cosmogony and the nebular hypothesis.

*[Three hours a week for two terms.]*



## COURSES IN MECHANICAL ENGINEERING.



### I.

**Thermodynamics**—The first term is given to a theoretical study of the steam engine, gas engine, and other heat motors involving the laws of thermodynamics of gases, saturated vapors and superheated steam. During the second term the applications of the studies of the previous term are dwelt upon and prime movers, the injector, condenser, refrigerating machinery, boilers, pumps and hydraulic machinery are studied in detail. Frequent reference is made to trade catalogues, of which an adequate supply should be obtained by the student. The text-book used is Thurston's *The Steam Engine*.

[*Five hours a week for two terms.*]

### II.

**Materials of Engineering**—This Course, supplemented by shopwork and laboratory work in testing materials of construction, is designed with the purpose of acquainting the student with the properties of the materials he will use in his profession. Tensile and shearing strength, elasticity and resistance are studied, together with the effects of strain, intermittent loading and impact. The process of manufacture of the most important materials is taken up and estimates of the cost of construction at the market prices complete the work. Thurston's *Materials of Engineering* is the text-book used.

[*Five hours a week for one term.*]

### III.

**Steam Engine Design**—In this Course the forms and sizes of steam engines, computation of dimensions and advantages and adaptation of special forms of engines for specific work are taken up which give the student a thorough knowledge of constructive detail. The latest researches and contemporary practice may be consulted in the numerous publications found in the University Library. During the first term of the Senior Year is required the complete design with working drawings of a simple non-condensing steam engine for a specific purpose. The second term is given to designing a multiple expansion, jacketed, condensing engine for marine service. The text-book used is Whitham's *Steam Engine Design*.

*[Five hours a week for two terms.]*

### IV.

**Steam Boilers**—This subject is treated much as that of the steam engine. The determination of sizes of parts from consideration of strains, thickness of shells, size of rivets, braces, furnaces and proper methods of connection of boilers with efficiency of furnace and life of boiler, are some of the subjects considered. The method of determining the efficiency of fuels, heating surface, heights of chimneys, boiler mountings, and materials used in construction are also discussed.

*[Three hours a week for one term.]*

### V.

**Kinematics**—This Course treats of the geometry of machinery, the determination of the paths of the various parts of an elementary combination and the constraining of the parts to move in these paths. The general theory is then applied to cams and gear teeth, the relative motion of

machine parts and kinematic trains, belts, pulleys, speed cones, link work and other aggregate combinations. Barr's *Kinematics of Machinery* is the text-book used.

[Five hours a week for one term.]

## VI.

**Machine Design**—This work involves a study of the form and strength of machine parts as applied in designing with computation of dimensions for fastenings, bearings, rotating pieces, belt and tooth gearing, etc. The derivation of rational formulæ and the determination of empirical formulæ are included and applied in designing. The text-book used is Unwin's *Elements of Machine Design*.

[Three hours a week for one term.]

## VII.

**Valve Gears**—This Course includes a complete study of the Zeuner diagram as applied to slide valves and the principal automatic cut-off engines. The radical gears, such as Hackworth, Walschaert, Marshall and Joy are treated in the same way and in conclusion the student is made familiar with the various types of Corliss valves, shifting eccentrics and link motions. The text-book is Spangler's *Valve Gears*.

[Two hours a week for one term.]

## VIII.

**Mechanical Laboratory**—The work taken up includes a study of the methods of testing the steam engine under varying running conditions, valve setting, calibration of thermometers, gauges and indicator springs, use of Prony brake, Weber and Emerson dynamometers, Pelton water wheel, Wier calibration, etc. Text-book, Carpenter's *Experimental Engineering*.

[One afternoon each week for one term.]

## IX.

**Thesis**—Each candidate for a degree in this department must present for graduation a thesis of considerable magnitude which will exhibit his knowledge of the course he has followed. It may embrace designing, experimental investigation or original research in a subject selected by the student and approved by the Professor. The major part of the second term, Senior Year, is devoted to the work and graduation is conditional upon the knowledge of Mechanical Engineering displayed in its preparation.

*[Twelve hours a week for one term.]*

## X.

## SHOPWORK.

(a) **Woodwork**—Exercises in planing, sawing, splicing, framing, scroll-sawing and turning.

*[Five hours a week for second term, Freshman Year.]*

(b) **Applications of Carpentry** to pattern-making, cores, etc., including parts of machines, pipe joints, cranks and bearings.

*[Four hours a week for one term.]*

(c) **Iron Forging**, welding, annealing, shaping, tool making, tempering and case hardening.

*[Four hours a week for one term.]*

(d) **Benchwork** in iron, including surface chipping, key-setting, draw-filing, scraping and polishing.

*[Five hours a week for one term.]*

(e) **Accurate Work** on lathe, planer, shaping and milling machines. Construction of machine tools, reamers, taps, twist-drills, gear wheels and complete machines.

*[Five hours a week for one term.]*

## COURSES IN ELECTRICAL ENGINEERING.



### I.

**Applied Electricity**—A course of lectures and recitations, supplemented by laboratory practice, on the general theory of electricity and magnetism and its application to practical work, as follows: Setting up and testing primary and secondary batteries, systems of call bells, electric gas lighting appliances, fire and burglar alarms, telegraph and telephone lines, switchboards and accessories.

Experiments with induction coils, magnets, switches, voltmeters, ammeters, wheatstone bridges, galvanometers and other measuring instruments. The study of direct current generators and motors, arc and incandescent lighting systems, street railway machinery and appliances, electric heating and forging, electrolytic processes, etc.

*[Five hours a week for two terms.]*

### II.

**Applied Electricity**—Lectures and laboratory work on the construction and testing of switches, magnets, measuring instruments, induction coils, etc. The calculation of sizes of wire and location of circuits for lighting and power, the experimental study of alternating current machinery and accessories.

If the student has acquired sufficient skill in handling tools in his shopwork he may design and build a small dynamo, starting with the rough castings, doing all the fitting and finishing, winding and adjusting, and finally testing for insulation, efficiency and adaptability to special purposes. This Course must be preceded by Course I. Both

I. and II. are required in the Short Course in Electrical Engineering; they are elective for general students and those studying telegraphy.

*[Five hours a week for two terms.]*

### III.

**Electricity and Magnetism**—The relations of currents to magnetism, magnetic units, permeability, hysteresis and other magnetic phenomena, solution of problems. Recitations and lectures. Text-book, Ewing's *Magnetic Induction*.

*[Two hours a week for two terms.]*

### IV.

**Dynamo-Electric Machinery**—Recitations on the physical theory of dynamo machines, armature actions and reactions, characteristic curves, mechanical points, theory of armature winding, the mathematical theory of alternating currents, phase relations, modern forms of single phase and multiphase generators and motors, design of transformers.

*[Five hours a week for two terms.]*

### V.

**Electrical Laboratory**—Practical work at wiring buildings for lights and power, testing circuits for insulation and grounds, construction and operation of storage batteries, management and care of dynamos, characteristic curves of particular machines under different conditions, efficiency tests of motors by absorption dynamometer methods, alternating current dynamo and transformer tests, the testing of storage batteries, and complete plant-efficiency tests. Careful notes are taken. This course is supplementary to Course IV. and both must be preceded by Course III

*[Five credit hours a week for two terms.]*



## VI.

**Drawing**—The designing and making of working drawings of switches, resistances, and other electrical apparatus. Calculation of sizes of wire and location of circuits for lighting buildings. Complete drawings of direct and alternating current dynamos. Laying out plants for power and lighting.

*[Three credit hours a week for two terms.]*

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## COURSES IN ARCHITECTURE.



## I.

**History of Architecture**—Lectures on Egyptian, Greek, Roman, Byzantine, Gothic and Renaissance styles.

*[Three hours a week for two terms.]*

## II.

**Architectural Designing**—Drawing and rendering in pen and ink and water colors of the elements employed in Classical and Renaissance design. The principles of planning and composition. Monumental structures. Problems in design involving the use of the classic orders, the Gothic and Renaissance styles. Interior decorations.

*[Ten hours a week for two terms.]*

## III.

**Specifications and Contracts**—Lectures and practice in the preparation of specifications and contracts for architectural structures.

*[Two hours a week for one term.]*



## IV.

**Photography**—Lectures on lenses, the camera, and the manipulation of dry plates. Practice in exposing, developing and printing. Copying, enlarging. Making of lantern slides.

[*Two hours a week for one term. Laboratory fee, \$10.*]

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For references to the drawing and mathematical courses see pages 69, 48, etc.

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## Courses in Artistic Drawing and Painting.



In this department the aim is to lay a thorough foundation in drawing and painting for those that wish to make art a profession, but the courses are so arranged as to be accessible to other students. The system of teaching which, is that followed in the best art schools, is intended to develop the individuality of each student, so that with a good understanding of the principles of art he may interpret nature according to his own temperament.

The work is done altogether from cast, object, and nature. The immediate surroundings of the University buildings, the lakes and the Saint Joseph River offer many beautiful subjects for the study of landscapes, and the classes are taken out in the summer for this study.

To the old collection of casts has been added a new one, which was carefully selected at the National School of Fine Arts in Paris, where all the casts are moulded directly from the originals. The collection is as follows:

**Full Figure**—The Diadumenos (British Museum); the Doryphoros (Naples). These two figures are full size.

The following figures are reduced mathematically: The Discobolus; the Venus of Milo; the Slave of Michelangelo; the Achilles; the Fighting Gladiator (Louvre), and Houdon's Anatomical Figure.

**Busts and Heads**—Asiaticus (Paris); Brutus (Rome, the Capitol); Cato (Rome, the Vatican); Cicero (Rome, the Capitol); Dante (Florence, Uffizi); Agrippa (Louvre); Venus (Vatican); A Centurion (Naples); Ariadne (the Capitol); Psyche of Naples (Naples); a Vestal (Vatican); Niobe (Vatican); the Two Daughters of Niobe (Florence).

Among the old busts are the Apollo Belvidere, the Antinous, Bacchus, Juno, Mercury, Demosthenes, etc.

Besides, there is a complete set of decorative and architectural ornaments, taken from monuments of antiquity, the middle ages and the Renaissance, and of elements of the human figure (hands, feet, etc.) from the antique, and some anatomical pieces.

## COURSE I.

### Elementary Class.

(a) Drawing from casts of ornaments purely geometrical, such as moldings, ovoloes, dentils, etc. Sketching from simple objects.

(b) Drawing from casts of ornaments of which the elements are living forms, such as ornamental leaves and flowers. Sketching from natural leaves and flowers.

(c) Drawing from architectural elements, such as pedestals, bases, shafts, cornices, etc. Lectures on perspective, direction of the principal lines in relation to the horizon. Elementary notions on the five orders of architecture.

(d) Drawing from casts of the human figure: hands, feet, masks, etc. Architectural ornaments. Sketching from familiar objects.

## COURSE II.

### Antique Class.

(a) Drawing from the antique of heads and busts. Still life drawing. Sketches of landscapes from nature. Selection of a subject. Composition in landscape. Applications of perspective.

(b) Drawing from the antique, full figure. Occasional studies of the head from the living model. Sketching from the costumed model. Still life in water colors. History of art.

## COURSE III.

### Life Class.

(a) Drawing from life. Artistic anatomy. Anatomical studies from the collections of Science Hall. Still life painting in water colors and oil. Landscape painting. Drawing for illustration.

(b) Painting from life. Portraiture. Historical composition.

**Sketch Class**—One hour a week. This class is open also to the students in the Mechanical Drawing classes. The students have themselves an organization, "The Crayon Club," the object of which is to sketch College scenes and to do illustrative work: these sketches are brought into class and criticised.

**Class of Decorative Design.**—The object of this department is to prepare students for professional work in decorative designings of all kinds. They will take up the study of historical ornament and will be taught the general principles of the arrangement of design, and from personal sketches of plants and flowers will be shown the art of making original designs for wall paper, book covers, stained glass, carpets, interior decorations, metal plates, etc. No particular program is given out as the teaching is purely individual.

## Courses in Mechanical Drawing.



The instruction begins with sketching from blocks, of various geometric forms, so that the hand and eye may be trained in Outline Drawing in pencil and pen. Then follows the study of light and shade.

After considerable practice, and when a thorough knowledge of freehand drawing has been acquired, the use of instruments is taken up. A large drawing hall for advanced students in the engineering courses is on the second floor of the Engineering Building. Beginning with the instruments, attention is given to accurate draughtmanship upon plates, illustrating problems in Civil, Electrical and Mechanical Engineering. This work is continued throughout the Courses.

### I.

**Freehand**—The work consists of sketching with pencil and pen from flat copies and models of machine parts and freehand lettering. Later in the term, the use of instruments, section-lining and lettering are taught. Text-book, Thorne's *Junior Course of Mechanical Drawing*.

[Two hours a week for one term]

### II.

**Projection Drawing**—The work embraces the principles of projections, methods of shop-drawing, tinting, tracing, blue printing, line-shading and the preparation of working

drawings of complete machines. Text-books, Thorne's *Intermediate Mechanical Drawing*, and Low and Bevis' *Manual of Machine Drawing and Design*. This Course must be preceded by Course I.

[*Two hours a week for two terms.*]

### III.

**Descriptive Geometry**—A series of accurate plates are made, illustrating the principles of orthographic and spherical projections, shades and shadows, perspective and isometric projections. Text-book, *Hal*.

[*One hour a week for first term, and two hours a week for second term.*]

### IV.

**Kinematic Drawing**—Designing of cams and gear teeth, complete working drawings of machines involving the application of kinematics and the computation of dimensions. Reference-book, Low and Bevis' *Manual of Machine Drawing and Design*.

[*Two hours a week for two terms.*]

### V.

**Topography**—Pen and colored topographical drawing, conventional signs, map drawing from notes taken from surveys. This Course must be preceded by Course I.

[*Four hours a week for one term.*]

### VI.

**Masonry**—Drawing and designing plans, elevations and sections of masonry constructions, foundations, dams, piers, abutments, culverts and arches.

[*Four hours a week for one term.*]

## VII.

**Bridge Designing**—Proceeding from simple framed girders to complete bridge-trusses of various designs. Complete design of a railroad bridge and detail drawings.

*[Four hours a week for two terms.]*

## VIII.

**Freehand**—The principles of freehand drawing in pencil and pen from objects, and later from biological specimens, plants, animals and microscopical preparations.

*[Two hours a week for two terms.]*

## IX.

**Freehand**—Advanced drawing from plants and anatomical dissections of animals. Illustrations for publications.

*[Two hours a week for two terms.]*

## COURSES IN CHEMISTRY.



### I.

(a) **General Descriptive Chemistry**—Lectures and Recitations. A complete study of the elements and their most important compounds, following the classification based on Mendeléeff's Law, and including a thorough discussion of the theories of the science. Careful attention is given to technical chemical processes and industries, and to the writing of chemical reactions. Text-book, *Newth*.

*[Two hours a week for two terms.]*

(b) **Experimental Chemistry**—A Laboratory Course to accompany Course (a), the work consisting of the preparation, by the student, of the elements and their more typical compounds, determination of molecular weights, verification of the fundamental laws of chemistry, etc. During the latter part of the Course, special attention is given to the characteristic reactions of the metals and to the principles of chemical analysis.

*[Two laboratory hours a week, with discussion, for two terms.]*

### II.

**Qualitative Chemical Analysis**—The work of this Course comprises the study, in the laboratory, of the reactions involved in the separation and detection of the more common inorganic bases and acids, the analysis of salts, mixtures of salts, and complex substances such as earths, ores, ashes, etc. Text-book, *Appleton*, supplemented by lectures.

*[Five laboratory hours a week, with recitation, for one term.]*



## III.

**Quantitative Chemical Analysis**—A laboratory study of the principles involved in the quantitative separation and estimation of substances, both gravimetrically and volumetrically. Complete analysis of a number of simple salts like Baric chloride, with partial analysis of substances such as steel, lye, drinking-water, etc. Reference-book, *Fresenius*.  
[*Five laboratory hours a week, with recitation, for one term.*]

## IV.

**Organic Chemistry**—Lectures, recitations, and laboratory work. A systematic study of the compounds of Carbon, involving the preparation, by the student in the laboratory, of the more important and typical organic compounds and the investigation of their properties. Ultimate organic analysis. Text-book, *Remsen*.

[*Seven laboratory hours a week, with two lectures or recitations, for one term.*]

## V.

**Urinary Analysis and Toxicology**—A Course of laboratory exercises in the methods employed in the detection and estimation of the constituents of the urine, and of the alkaloids and principal organic poisons. Text-book, *Witthaus*.

[*Five hours a week for one term.*]

## VI.

**Technical Chemical Analysis**—An advanced course, intended for students of General Science specializing in chemistry. Special courses in gas analysis, water analysis, sugar analysis, commercial organic analysis, etc., at the option of the student.

[*Five to fifteen laboratory hours a week for both terms.*]

## VII.

**Organic Chemistry**—Chiefly laboratory work. An advanced course, intended for General Science students specializing in chemistry.

*[Ten to fifteen laboratory hours a week for both terms.]*

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## COURSES IN PHYSICS.



## I.

**Elementary Physics**—A complete Course of recitations and lectures, including mechanics, heat, sound, light, electricity, and magnetism. The work is fully illustrated by experiments.

*[Five hours a week for one term.]*

## II.

**General Physics**—In this Course there is a more extended treatment of the same subjects than is given in Course I. Mathematical principles are applied to physical phenomena. Special attention is paid to accuracy in the mathematical work and in the statements of the principles involved. Lectures and recitations, using Carhart's *University Physics* as a text-book.

*[Three hours a week for two terms.]*

## III.

**Physical Laboratory**—Manipulation of apparatus. Length, mass and time measurements. Elementary work in density, elasticity, heat, light, and sound. The student is taught to depend on his own resources and to use the reference library. Careful notes are required of all experiments performed.

*[One hour a week for one term]*

## IV.

**Physical Laboratory**—Special advanced work in heat, light, mechanics, sound, electricity, and magnetism. Accuracy in observations and in the calculation and recording of results is required. Students may specialize here according to the college course which they are following. This Course must be preceded by Courses II. and III. For list of apparatus see page 14.

*[Three hours a week for two terms.]*

## COURSES IN BOTANY.



### I.

**Elementary Botany**—Lectures, recitations, and laboratory work. A study of the morphology of the root, stem, leaf, flower, fruit, and seed. The development of the embryo and the processes of pollination and fertilization. Microscopic study of the vegetable cell, of its products, of cell formation, and of plant tissues. Simple experiments demonstrating various physiological phenomena. The structure and reproduction of the Algæ, Fungi, Mosses and Ferns. The analysis of Phanerogams occupies the time during the spring months, and the student is made familiar with the local flora. Text-books, Bastin's *College Botany* and Gray's *Manual*.

[*Five hours a week for two terms.*]

### II.

**Botanical Laboratory**—Supplementary to Course I. Special work on the Thallophyta and Bryophyta. Plants under these headings are collected and put before the student that he may become more familiar with their morphology, structure, etc. This course is to accompany or be preceded by Course I.

[*Two hours a week for one term.*]

### III.

**Advanced Botany**—Lectures, recitations, and laboratory work. The work in this course is essentially the same as that laid out in Vine's text-book of Botany. Special work is required in one particular group of plants. Herbarium

study is encouraged as well as the collecting and preparing of plants for preservation. During the spring months frequent excursions are made into the neighboring fields and woods and the local aquatic and land flora are collected and studied.

[*Ten hours a week for two terms.*]

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## COURSES IN ZOOLOGY.



### I.

**Elementary Zoology**—Lectures and recitations. General ideas on the animal kingdom. Animals and plants defined. The homology and analogy between the organs and parts of animals. The morphology, classification, structure, development and relationship of the types of vertebrates and invertebrates. Text-book, *Nicholson*.

[*Five hours a week for one term.*]

### II.

**Laboratory**—Supplementary to Course I., chiefly invertebrate work, including a study of microscopic forms of the Protozoa and Coelenterata. Work in Entomology, etc.

[*Two hours a week for one term.*]

### III.

**Invertebrate Zoology**—Lectures, recitations, and laboratory work. In this course there is a more extended treatment of Invertebrates. Dissections of the different types of the higher forms. Careful notes and drawings are made from these dissections. The use of the Reference Library. The student begins to do research-work in this course.

Opportunity is given to carry on systematic work on the different groups contained in the University Museum.

*[Six hours a week for one term.]*

#### IV.

**Comparative Vertebrate Anatomy**—Lectures and laboratory work. This course consists of a thorough study and classification of types of each of the five classes of vertebrates accompanied by dissections. Special attention is given to Osteology and comparisons are made between the bones of skeletons representing each order of the vertebrates. Opportunities are given for practical work in mounting the skeletons of different animals.

*[Five hours a week for one term.]*

#### V.

**Mammalian Anatomy**—This course has been provided for students preparing themselves for a medical course. The work consists of demonstrations and thorough dissections on the anatomy of the cat.

*[Five hours a week for one term.]*

#### VI.

**Comparative Embryology**—Lectures and laboratory work. A study of the developmental history of invertebrates, including a comparison of the germ-cell and sperm-cell in different types of animals. The maturation and fertilization of the ovum. Mitosis and segmentation. The development of the Ectoderm, Mesoderm, and Endoderm compared in the types of invertebrates, differentiation of tissues, development of the embryo, etc. Special work on the embryology of a vertebrate—Fish.

*[Three hours a week for one term.]*

## COURSES IN GENERAL BIOLOGY.



### I.

**Cytology**—Lectures and laboratory work. History of the cell, cell structure, organization, activity, and mitosis.

*[Two hours a week for one term.]*

### II.

**Elementary Biology**—Lectures and laboratory work. The lower forms of animals and plants compared as to structure, function, and relationship of parts. Animal and plant dissection. Biogenesis and Abiogenesis, Homogenesis and Heterogenesis. The alternation of generation in different forms of animals and plants worked out. The theories of evolution are discussed in this course. Text-book, *Parker*.

*[Five hours a week for one term.]*



## COURSES IN PHARMACY.



### I.

**Elements of Pharmacy**—Lectures, recitations and demonstrations, on the "Art and Science of Pharmacy," embracing its history, review of the important Pharmacopœias, Dispensatories, and Formularies; their values compared and discussed. A course follows for the remainder of the year, on the principles and the various processes governing the



practice of Pharmacy. Text-book, Coblenz's *Handbook of Pharmacy*.

[*Four hours a week for one year.*]

## II.

**Galenical Pharmacy.**—A Laboratory Course to accompany Course I. This includes the practical application of Pharmaceutical processes to the manufacture of official preparations of the U. S. Pharmacopœa. Text-book, *U. S. Pharmacopœa*.

[*Five hours a week, the first year.*]

## III.

**General Pharmaceutical Chemistry.**—In this course, the Chemical bases and their compounds are considered, with special reference to their importance in Pharmacy and Materia Medica. Text-book, Simon's *Pharmaceutical Chemistry*.

[*Three hours a week the second year.*]

## IV.

**Laboratory of Inorganic Pharmacy.**—In the second year there is a thorough course in the preparation of Pharmaceutical and technical Chemicals. This course is supplemented by a series of lectures on the selected methods. Text-book, Oldberg's *Manual of Inorganic Preparations*.

[*Three hours a week, for six months.*]

## V.

**General Pharmacy.**—A systematic classification organic and inorganic drugs, from the pharmaceutical stand-point, followed by a close study of each of the classes. Text-book, Remington's *Practice of Pharmacy*.

[*Two hours a week for two terms.*]

## VI.

**Magistral Pharmacy**—Includes the manifold methods of Dispensing Pharmacy, with special consideration of incompatibility, posology, and the principles of Elegant Pharmacy. Text-book, Scovilles' *The Art of Dispensing*.

[*Two hours a week for two terms.*]

## VII.

(1) **Materia Medica, Pharmacognosy and Therapeutics**—A detailed consideration of medicinal substances; their origin and composition.

(2) **Therapeutics**—The action of each drug will be considered according to its grouping.

(3) **Pharmacognosy**—Includes the identification of each drug according to its physical properties, with special reference to its quality. Text-books: (1) Sayres' *Materia Medica*. (2) Professor's Notes on *Therapeutics*. (3) Rusby and Jeilifee's *Essentials of Pharmacognosy*.

[*Two hours a week for two years.*]

## VIII.

**Pharmaceutical Analysis**—Includes Pharmaceutical Assaying, Pharmacopœial Limitations, Alkaloidal Analysis, Bacteriological, Micro-chemical, Polariscope and Spectroscopic Estimations, Technical Analysis of Compounds used in the arts, Toxicology, Urinalysis, Food Analysis and Forensic Pharmacy. Text-books, Muler's *Analytical Chemistry*, Stanislaus, *Scheme in Uranalysis*.

## COURSES IN MICROSCOPY.



### I.

**Microscopy**—Lectures and laboratory work. Refraction and dispersion of light and illumination. The index of refraction in different media. Different shapes of lenses. Spherical and chromatic aberration. The selection and care of a good microscope. The use of accessories for advanced work: immersion and adjustable objectives, camera lucida, sub-stage condenser, polarizer, micrometers, etc. Special work in photo-micrography.

*[Three hours a week for one term.]*

### II.

**Micro-Chemistry**—Laboratory work. The preparation of micro-chemical reagents and their application in testing, fixing, hardening, staining, clearing, and mounting tissues and organs.

*[One hour a week for one term.]*

## COURSES IN HUMAN ANATOMY.



## I.

**Elementary Human Histology**—Laboratory work and demonstrations. Introductory work on the manipulation of the microscope. Prepared tissues of the organs of the human body given to each student, and their structure demonstrated.

*[Two hours a week for one term.]*

## II.

**Advanced Human Histology**—Lectures, recitations and laboratory work. Methods of hardening, staining, embedding, section cutting and mounting of animal tissues. Careful work on the nervous system—brain and spinal cord, termination of nerve fibres, etc. Drawings made from each preparation. Text-book, *Schäfer*.

*[Three hours a week for one term.]*

## III.

**Human Anatomy**—Lectures and recitations. Osteology and descriptive anatomy of the muscular, digestive, circulatory and nervous systems.

*[Two hours a week for four terms.]*

## COURSES IN HUMAN PHYSIOLOGY.



### I.

**Elementary Physiology**—Lectures, recitations and demonstrations with the stereopticon. The study of the human skeleton including the physiology and hygiene of the bones. The action, relation, structure and hygiene of muscles. The digestive, circulatory and excretory systems demonstrated by models and charts. The anatomy and structure of the nervous system and simple experiments on the same. Text-book, *Martin*.

*[Five hours a week for one term.]*

### II.

**Advanced Physiology**—Lectures, recitations and experimental work. A more extended treatment of Course I. on alimentation, deglutition, stomach and intestinal digestion, action of bile and pancreatic juice, absorption, properties of lymph and chyle, secretion, excretion, animal heat and its sources. The physiological divisions and structure of the nervous system. Motor and sensory nerves. Physiological anatomy of the spinal cord. General arrangement and function of the sympathetic system, etc.

*[Two hours a week for two terms.]*

### III.

**Hygiene**—Lectures on personal, domestic and municipal hygiene.

*[One hour a week for one term.]*

## COURSE IN BACTERIOLOGY.



## I.

**Lectures and Laboratory Work**—Lectures on the form, classification, structure and reproduction of bacteria. The relations of bacteria to disease, etc. The principles of sterilization are pointed out. Isolation and identification of pathogenic germs form a large part of the work. Emphasis given to the detection of pathogenic germs by the various staining processes. The early part of the laboratory work is occupied in the preparation of the various culture-media and the growth of certain non-pathogenic forms on these media. Inoculations of animals with pathogenic germs and effects observed. Text-book, *Abbott*.

[*Three hours a week for one term.*]

## COURSES IN GEOLOGY.



## I.

**Elementary Mineralogy**—Lectures, recitations, and laboratory work. A study of crystallography and the classification of minerals, accompanied by practice in the laboratory and museum in the determination of minerals, especially the ores. Blow-pipe analysis. *Collins.*

[*Two hours a week for one term.*]

## II.

**Assaying**—Chiefly laboratory work. Furnace assaying of the ores of gold, silver and lead. *Ricketts.*

[*Two laboratory hours a week for one term.*]

## III.

**Geology**—Lectures and recitations. The study of the general features of the earth. The material composing the accessible parts of the earth. The arrangement of the material in rocks. The causes of geological changes. The history of the earth and the various forms of life that existed in the different periods of successive geological ages. Text-book, *Dana.*

[*Five hours a week for one term.*]



## COURSES IN MUSIC.



## FIRST YEAR.

## I.

**Violin**—Studies by Wichtl, Ries, Mazas, Kreutzer, Fiorillo. Compositions by Dancla, DeBeriot, Sitt.

## II.

**Pianoforte**—Kœhler's and Damm's *Piano School*. Studies by Lœschhorn, Berens, Czerny, Heller. Sonatinas and easy sonatas by Clementi, Haydn, Reinecke and Mozart. *Jugendalbum* and *Kinderscenen* by Schumann.

## III.

**Voice**—Scales and exercises. Studies by Sieber, Concone and Garcia. English songs.

## IV.

**Organ**—Rink's *Organ School*. Eugene Thayer's *Studies*, *Light Preludes and Fugues* by Bach.

## SECOND YEAR.

## Ia.

**Violin**—Studies by Rode, Schradieck, Dont. Sonatas and pieces by Tartini, Bach, Beethoven and Mozart.

## IIa.

**Pianoforte**—Studies by Czerny, Heller, Hasert, Lecouppy, Cramer and Krause. Octave Studies by Turner. Bach's Preludes, Fugues and Inventions. Sonatas and pieces by Mozart, Haydn, Beethoven, Mendelssohn, Schumann and Schubert.

## IIIa.

**Voice**—Vocalises and studies by Vaccai, Sieber and Cirillo. Standard English, French and German songs.

## IVa.

**Organ**—Schneider-Warren's *Pedal Studies*. Easy sonatas by Mendelssohn, Merkel, Rheinberger. Preludes and Fugues by Bach. *Twenty Studies* by Whiting. *Canonic Studies* by Chadwick.

## V.

**Harmony**—Construction and use of chords. Harmonization of melodies. Harmonizing from figured bass. Text-books: Gœtschius' *Tone Relations*, Chadwick's *Harmony*.

## THIRD YEAR.

## Ib.

**Violin**—Sonatas by Bach. Studies by Schradieck-Alard, Wieniawski. Concertos and pieces by Spohr, Viëuxtemps, Mendelssohn, Dvorak.

## IIb.

**Pianoforte**—*Gradus ad Parnassum*, Clementi-Tausig. *Wohl Temperirte Klavier* by Bach. English and French Suites by Bach. *Etudes* by Haberbier and Henselt. Sonatas, concertos and pieces by Beethoven, Weber, Mendelssohn, Chopin, Schubert and Grieg.

## IIIb.

**Voice**—Advanced exercises. Studies in coloratura singing. Selections from Masses and Oratorios by Bach, Mozart, Hayden. Standard modern and classic songs.

## IVb.

**Organ**—Sonatas, Preludes and *Chorale Vorspiele* by Bach. Concert pieces by Hændel, Merkel, Salome, Whiting, Best, Rheinberger.

## Va.

**Harmony**—(Counterpoint.) Simple two and four part counterpoint; double and florid counterpoint. Canon. Fugue.

## FOURTH YEAR.

## Ic.

**Violin**—Studies by Paganini. Concertos and pieces by Beethoven, Brahms, Bruch, Joachim and others.

## IIc.

**Pianoforte**—Studies by Tausig and Chopin. Sonatas, concertos, and concert pieces by Schumann, Brahms, Rubinstein, Liszt.

## IIIc.

**Voice**—Study of recitatives and arias from the oratorios and operas of Hændel, Haydn, Gounod, Meyerbeer, Wagner, Massenet and others.

## IVc.

**Organ**—The greater Preludes, Fantasies and Fugues of Bach. Sonatas and concert pieces by Thiele, Widor, Dubois, Guilmant and Saint-Säens.

## Vb.

**Harmony**—(Composition). Construction of musical forms, i. e., the Sonata, Rondo, etc. Practical application in an original manner of these forms. Orchestration.



Instruction is also given on the Viola, Flute, Piccolo, Cornet, Trombone, Guitar and Mandolin.

Opportunity is given to the advanced students of playing in the University Orchestra and Band, and of singing in the Orpheus Society and the University Choir.

### REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MUSIC.

1. The candidate must have studied music for one year in the University.
2. He must have a thorough theoretic knowledge of the four instruments mentioned in the courses described above, and a practical mastery of one of them.
3. He must pass a written examination in Harmony, Counterpoint and Composition.
4. He must submit to the examiner two original compositions: (a) a fugue for full orchestra, or for four voices with independent orchestral accompaniment; (b) a composition in the free form (sonata or rondo) for pianoforte, or a trio (pianoforte, violin and violoncello.)

## EVIDENCES OF CHRISTIANITY.



All Catholic students are obliged to attend the Courses in Evidences of Christianity.

The text-book used in the Junior and Senior years is *Hand-Book of the Christian Religion*, by Wilmers.

A two-year course in Deharbe's *Middle Catechism* precedes the course above.

In the Preparatory School Bible History and the Baltimore Catechism are used.

## REGULATIONS GOVERNING ADMISSION TO THE COLLEGIATE COURSES.



Examinations in all the subjects required for admission to the University are held at Notre Dame in September, at the beginning of the Fall term.

Certificates of work done in public or private schools will not be accepted instead of examinations, unless the applicant has passed the final examination after a full course in his school, and the University Faculty are satisfied with the standing of the school.

*No school certificate will be accepted in place of the entrance examination in English, or History, or instead of the Preparatory Mathematics of the Engineering and Science Courses.*

Applicants for advanced standing that present certificates from other colleges or universities may be received at the discretion of the Faculty with or without examination as regards particular cases.

No student will be received as a candidate for the degree of Bachelor after the beginning of the Senior year unless he passes an examination in the Metaphysics and Ethics already studied by the Senior class of the University.

*No student will be admitted to any course of the Senior year until all conditions have been cancelled.*

Catholic Students that are candidates for any degree are required to take the prescribed Courses in Evidences of Religion.

## CONDITIONAL ADMISSION TO FRESHMAN CLASSES.

A candidate failing to pass satisfactory examinations in one or more of the subjects required for admission to any Collegiate Course may, at the discretion of the Faculty, be admitted to his class conditionally, to make up his deficiency by extra study *within one school year*. Only when the conditions are removed will the student be admitted to full standing in his class.

## ADMISSION TO ADVANCED STANDING.

Candidates for admission to advanced classes in any course are required to pass, *in addition* to the usual entrance examinations, an examination in the work already done by the classes they desire to enter. The additional subjects may be found in the programme of courses.





I. School of Arts and Letters.

II. School of Science.

III. School of Engineering.

IV. School of Law.

V. School of Pharmacy.

# SCHOOL OF ARTS AND LETTERS.



## PRIMARY ENTRANCE EXAMINATIONS.

**English**—Part of the examination time is given for answering questions upon books marked *Group A* below, the remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are :

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

**Latin**.—Grammar, complete; Cæsar: four books of the Gallic War; Cicero: four orations against Catiline; Virgil: *Bucolics*, *Georgics*; or Ovid: about 1,200 verses; translation at sight of passages from Cicero and Cæsar; translation of English into Latin based on the text of the author.

**Greek**—(*For Classical Students only.*) Grammar, Etymology, and general rules of Syntax; Xenophon: *Anabasis*, four books; prose composition based on text.

**History**—(a) United States—as set out in Johnson's *History of the United States*, or an equivalent.

(b) A general knowledge of the outlines of Greek and Roman History and of Mediæval and Modern History, as set out in the texts used in the high schools and academies of the country.

**Algebra**—The whole subject as far as logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises of other authors.

**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**Physiology**—Martin's *Human Body*, or an equivalent.

**Chemistry**—Elements of inorganic chemistry, as given in high schools of good standing.

**Physics**—Elementary. The preparation on this subject should include a course of lectures, illustrated by experiments, and recitations from a text-book similar to *Carhart and Chute's* or *Gage's*. Laboratory work is desired, but it is not required.

**Graduation Thesis**—A graduation thesis is required from each student in the Classical and English Courses. This thesis is to be handed in before May.

**French and German.**—A year's study of either German or French is required for entrance to the course in English and the course in History and Economics. Students that present French will continue French during the Freshman year and begin German: in this case German will be continued during the Sophomore year. A like regulation holds for those that present German at the entrance examination—French will be continued during the Sophomore year.

The entrance examination requires sight translation of ordinary German or French prose: an ability to translate, rather than accurate grammatical knowledge, is expected.

## Studies Prescribed in the Classical Course.

(DEGREE: A. B.)

### FRESHMAN YEAR.

SUBJECTS: FIRST TERM.		Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.		Hours a Week	SEE FOR DESCRIPTION:	
			Page	Course				Page	Course
Latin, . . .		5	37	I.	Latin, . . .		5	37	II.
Greek, . . .		5	33	I.	Greek, . . .		5	33	II.
English, . . .		4	40	I.	English, . . .		4	40	I.
History, . . .		3	44	I.	History, . . .		3	44	I.
Elocution, . . .		2	44	VIII.	Elocution, . . .		2	44	VIII.
Elective, . . .		5			Elective, . . .		5		

### SOPHOMORE YEAR.

Latin, . . .	5	37	III.	Latin, . . .	5	38	IV.
Greek, . . .	5	33	III.	Greek, . . .	5	34	IV.
English, . . .	4	40	II.	English, . . .	4	40	II.
History, . . .	3	44	II.	History, . . .	3	44	II.
Elocution, . . .	2	44	VIII.	Elocution, . . .	2	44	VIII.
Elective, . . .	5			Philosophy, . . .	5	29	I.

### JUNIOR YEAR.

Latin, . . .	5	38	V.	Latin, . . .	5	38	VI.
Greek, . . .	5	34	V.	Greek, . . .	5	34	VI.
English, . . .	4	41	III.	English, . . .	4	41	III.
Philosophy, . . .	5	29	II.	Philosophy, . . .	5	29	II.
Elocution, . . .	2	44	VIII.	Elocution, . . .	2	44	VIII.
Economics, . . .		46	I.	Elective, . . .	5		
	4						

### SENIOR YEAR.

Latin, . . .	5	39	VII.	Latin, . . .	5	39	VIII.
Greek, . . .	5	35	VII.	Greek, . . .	5	36	VIII.
English, . . .	4	41	IV.	English, . . .	4	41	IV.
Philosophy, . . .	7	30	III.	Philosophy, . . .	7	30	IV.
Elocution, . . .	2	44	VIII.	Elocution, . . .	2	44	VIII.

# Studies Prescribed in the English Course.

(DEGREE: Litt. B.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
English, . .	4	40	I.	English, . .	4	40	I.
Latin, . . .	5	37	I.	Latin, . . .	5	37	II.
French or . .	5	47	I.	French or . .	5	47	I.
German, . .		49	I.	German, . .		49	I.
History, . .	3	44	I.	History, . .	3	44	I.
Elocution, .	2	44	VIII.	Elocution, .	2	44	VIII.
Elective, . .	5			Elective, . .	5		

## SOPHOMORE YEAR.

English, . .	4	40	II.	English, . .	4	40	II.
Latin, . . .	5	37	III.	Latin, . . .	5	38	IV.
French, . . .	2	48	II.	French, . . .	2	48	II.
German, . . .	3	49	II.	German, . . .	3	49	II.
History, . . .	3	44	II.	History, . . .	3	44	II.
Elocution, .	2	44	VIII.	Elocution, .	2	44	VIII.
Elective, . .	5			Philosophy, .	5	29	I.

## JUNIOR YEAR.

English, . .	4	41	III.	English, . .	4	41	III.
Latin, . . .	5	38	V.	Latin, . . .	5	38	VI.
Philosophy, .	5	29	II.	Philosophy, .	5	29	II.
Elocution, .	2	44	VIII.	Elocution, .	2	44	VIII.
History, . .	4	45	III.	History, . .	4	45	III.
Elective, . .	5			Elective, . .	5		

## SENIOR YEAR.

English, . .	4	41	IV.	English, . .	4	41	IV.
Latin, . . .	4	39	VII.	Latin, . . .	4	39	VIII.
Philosophy, .	7	30	III.	Philosophy, .	7	30	IV.
Economics, .	4	46	I.	History, . .	5	45	IV.
Elocution, .	2	44	VIII.	Elocution, .	2	44	VIII.

# Course in History and Economics.

(DEGREE PH. B.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
History, . .	4	44	I.	History, . .	4	44	I.
English, . .	4	40	I.	English, . .	4	40	I.
French or . .	5	47	I.	French or . .	5	47	I.
German, . .	5	49	I.	German, . .	5	49	I.
Spanish, . .	3	48		Spanish, . .	3	48	
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.

## SOPHOMORE YEAR.

History, . .	4	44	II. a IV. a	History, . .	4	44	II. a IV. a
Political Sci'ce,	4	46	I.	Political Sci'ce,	3	46	II.
English, . .	4	40	II.	Philosophy, . .	5	29	I.
German, . .	3	49	II.	English, . .	4	40	II.
French, . .	2	48	II.	German, . .	3	49	II.
				French, . .	2	48	II.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.
Elective, . .	3			Elective, . .	3		

## JUNIOR YEAR.

History, . .	7	45	II. b III.	History, . .	7	45	II. b III.
Political Sci'ce,	3	46	II.	Political Sci'ce,	3	46	III.
Philosophy, . .	5	29	II.	Philosophy, . .	5	29	II.
English, . .	4	41	III.	English, . .	4	41	III.
Elective, . .	2			Elective, . .	2		
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.

## SENIOR YEAR.

History, . .	3	45	IV. b	History, . .	3	45	IV. b
Political Sci'ce,	7	46	IV. v. VII.	Political Sci'ce,	6	46	VI. VII. VIII.
Philosophy, . .	5	30	III.	Philosophy, . .	5	30	IV.
English, . .	4	41	VIII.	English, . .	4	41	IV.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.



## COURSE IN JOURNALISM.

(DEGREE: Master of Letters in Journalism.)



This is strictly a post-graduate course and is open only to those who have completed the Course in History and Economics described on page 98. The purely academic training afforded by that Course is here supplemented by a year's practical experience in newspaper work under the immediate supervision of an experienced journalist. Abundant opportunity for practice is offered by the newspapers of Chicago (all of which have regular correspondents at the University) and of other large cities. In addition to the routine work of this Course, each student is expected to contribute to special departments in newspapers and magazines, and diplomas will not be issued to those who have failed to find a market for at least some of their work. The classes in this Course are:

**Journalism**—Lectures and recitations on the history of journalism. Critical comparative study of home and foreign newspapers. The law of newspaper libel. Copyright and postal regulations. Daily exercises in reporting, and frequent exercises in editorial writing; department work; musical and dramatic criticism and book reviews. Editing copy, proof-reading and "making-up" a newspaper. Lectures on topics of current interest, and exercises in the treatment of them. Required readings in Dana's *Art of Newspaper Making*, Shuman's *Steps into Journalism*, Hudson's *History of Journalism*, Luse's *Writing for the Press*, any good treatise on the law of libel and slander, and the biographies of famous journalists. Discussion of the business side of newspaper work, advertising, circulation, etc.

**Theology**—Wilhelm and Scannell's *Manual of Dogmatic Theology*.

**Phonography and Typewriting**—Ordinary Course.

**Political History of the 19th Century.**

## SCHOOL OF SCIENCE.



Two courses are given, one a course in General Science, the other a course in Biology.

## REQUIREMENTS FOR ADMISSION.

Candidates for the Freshman class of either of these courses must be prepared to pass an examination in Arithmetic, included in English examinations, and Geography, unless satisfactory assurance of their proficiency in these branches is given. In addition, they must pass an examination in the following subjects:

**History**—(a) United States,  
(b) General outlines. See page 98.

**Algebra**—The whole subject as far as logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises of other authors.

**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**Chemistry**—A course of at least fifty experiments in elementary chemistry actually performed by the pupil.

**French or German**—Ability to translate at sight easy French or German into English, and easy English sentences into French or German. In the courses in Biology and General Science French and German are required.

**English**—Part of the examination time is given for answering questions upon books marked *Group A*, the

remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

**Latin**—Grammar, complete; Cæsar: four books of the Gallic War; translation of English into Latin based on the text of this author

## Introduction to the Course in General Science.



The Course in General Science is calculated to afford such an acquaintance with the methods and facts of modern science as will best enable the student to fit himself, either for further study of a technical or professional kind, or for the activities of business life. The Natural and Physical Sciences constitute the primary studies of this Course. Grouped about these are those studies in English, Mathematics, and the Modern Languages, which experience has shown to be necessary for the intelligent pursuit of science and for the attainment of the object of the Course.

Two essays on scientific topics are required of every student during the Sophomore Year and two during the Junior Year.

The scientific work of the Senior Year is elective. Advanced courses may be chosen in Physics, Chemistry, Biology, or Mathematics.

Every candidate for a degree in the Course of General Science is required to submit, at least six weeks before the final examinations, a written thesis upon some subject connected with the elective work of the Senior Year. The subject chosen must have the approval of the Professor in the course elected. The Thesis shall contain not less than six thousand words, and must be satisfactory in matter and treatment.

Students that complete the required courses, pass the final examinations, and present a satisfactory thesis will receive the degree of Bachelor of Science.

(The facilities for instruction in this Course are described on page 16.)  
For Laboratory Fees, see page 114.

## Studies Prescribed in the Course in General Science.

(DEGREE: B. S.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Physiology, . .	5	86	I.	Zoology, . . .	6	79	I. II.
Physics, . . .	5	76	I.	Chemistry, . .	4	74	I.
Chemistry, . .	4	74	I.	Trigonometry, .	5	50	II.
Anatomy, . . .	2	85	I.	English, . . .	5	40	I.
Algebra, . . .	5	50	I.	French or Ger.,	2	47-49	I.
English, . . .	5	40	I.	Drawing, . . .	2	71	II.
French or Ger.,	2	47-49	I.				
Drawing, . . .	2	71	I.				

## SOPHOMORE YEAR.

Botany, . . .	5	78	I.	Botany, . . .	6	78	I. II.
Chemistry, . .	5	74	II.	Physics, . . .	4	76	II. III.
French or Ger.,	2	47-49	II.	Anal. Geometry, .	5	51	III.
Physics, . . .	3	76	II.	French or Ger.,	2	47-49	II.
English, . . .	1	42	V.	Drawing, . . .	2	71	II.
Elective, . . .	3			English, . . .	1	42	V.
Drawing, . . .	2	71	II.	Elective, . . .	3		

## JUNIOR YEAR.

Geology, . . .	2	88	I.	Geology, . . .	7	88	II. III.
Calculus, . . .	5	51	IV.	Calculus, . . .	5	52	V.
Astronomy, . .	3	60	I.	Astronomy, . .	3	60	I.
English, . . .	1	42	V.	Philosophy, . .	5	29	I.
Two Electives,	5			English, . . .	1	42	V.
				One Elective,	3		

## SENIOR YEAR.

Three Electives in Science, . .	9-15			Three Electives in Science, . .	9-15		
Philosophy, . .	5.	29	II.	Philosophy, . .	5	29	II.
French or Ger.,				French or Ger.,			
Scientific Readings, . .	1			Scientific Readings, . .	1		

## Introduction to the Course in Biology.



The Course in Biology has been designed for students that wish to devote their time largely to biological pursuits, either as an immediate preparation for the study of medicine or veterinary science, or with a view to teaching or otherwise engaging in biological research. The students in this Course are required to prepare an essay during the first term of the Junior Year on some subject pertaining to biology. Every candidate for a degree must submit a written thesis accompanied with original drawings. This thesis must be presented two weeks before the final examinations. Students not preparing themselves for a medical course may substitute for the advanced Courses in Anatomy and Physiology equivalents from either Mathematics, Physics, or English Literature.

### LABORATORY FEES.

Biological Laboratory— <i>Biology II.</i> —2nd session, . . . . .	\$5.00.
Biological Laboratory— <i>Zoology II.</i> —2nd session, . . . . .	2.50.
Use of Apparatus in Biological Laboratory, . . . . .	5.00.
Botanical Laboratory— <i>II.</i> —2nd session, . . . . .	5.00.
Use of Apparatus in Botanical Laboratory, . . . . .	5.00.
Bacteriological Laboratory—I.—1st session, . . . . .	10.00.
Use of Apparatus in Mineralogical Laboratory, . . . . .	5.00.

(The facilities for instruction in this Course are described on page 16.)



## Studies Prescribed in the Course in Biology.

(DEGREE: B. S.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Physiology, . .	5	86	I.	Zoology, . .	6	79	I. II.
Physics, . .	5	76	I.	Chemistry, . .	4	74	I.
Chemistry, . .	4	74	I.	English, . .	5	40	I.
Anatomy, . .	2	85	I.	French or Ger.,	2	47-49	I.
English, . .	5	40	I.	Drawing, . .	2	73	VIII.
French or Ger.,	2	47-49	I.				
Drawing, . .	2	73	VIII.				

## SOPHOMORE YEAR.

Botany, . . .	5	78	I.	Botany, . . .	6	78	I. II.
Gen'l Biology,	2	81	I.	Gen'l Biology,	5	81	II.
Microscopy, .	3	84	I.	Microscopy, .	1	84	II.
Chemistry, . .	5	74	II.	Chemistry, . .	7	75	IV.
French or Ger.,	2	48-49	II.	French or Ger.,	2	48-49	II.
Drawing, . .	2	73	IX.	Drawing, . .	2	72	IX.
English, . .	1	42	V.	English, . .	1	42	V.

## JUNIOR YEAR.

Human Anatomy, . .	2	85	III.	Human Anatomy, . .	2	85	III.
Zoology, . .	6	79	III.	Zoology, . .	10	80	IV. V.
Bacteriology, .	3	87	I.	Chemistry, . .	5	75	III.
Geology, . .	2	88	I.	Geology, . .	5	88	III.
English, . .	1	42	V.	Philosophy, . .	5	29	I.
				English, . .	1	42	V.

## SENIOR YEAR.

Human Anatomy, . .	5.	85	II. III.	Human Anatomy, . .	2	85	III.
Human Physiology, .	4	86	II. III.	Human Physiology, .	3	86	II.
Botany, . .	10	78	III.	Botany, . .	10	78	III.
Philosophy, .	5	29	II.	Zoology, . .	3	80	IV.
				Philosophy, .	5	29	II.



## SCHOOL OF PHARMACY.



There are two courses in Pharmacy: one of two years, leading to the degree, *Graduate in Pharmacy (Ph. G.)*; and another of three years, leading to the degree, *Pharmaceutical Chemist (Phar. C.)* The courses in the first two years of the three-year course are the same as those required for the degree, *G. Phar.*

### ADMISSION.

Candidates for admission to these courses must be at least 17 years of age.

The requirements for admission are the same as those prescribed on pages 104 and 105, with the exception that French and German are excluded.

Experience in a drug-store will not be accepted instead of the entrance examinations, but it will be of great advantage to the student in the work of this Course.

### METHODS AND EQUIPMENT.

The subjects studied in this department are intended to impart a thorough theoretical as well as a practical knowledge of Pharmacy, the work commencing with the simplest and gradually leading up to the most difficult and complicated processes.

Especial attention is given to the little details, often neglected in schools, which are so essential to success in any professional work and particularly in Pharmacy. The student is carefully drilled in store etiquette, business hints, prescription work, and dispensing. Neatness and order in all the operations and extreme care in the manufacture of preparations are required throughout the Course.

On entering the laboratory the student is assigned to a

desk fully equipped with all the necessary apparatus. He has at hand balances, percolators, mortars, graduated glasses, hydrometers, thermometers, pill machines, Liebig condensers, stills, a large assortment of porcelain, platinum and glass utensils, sand and steam baths and other minor articles that are included in a complete laboratory outfit.

### THESIS.

During the last year the student is required to spend at least two hours a week in original research on a subject within the domain of Pharmacy. The results of this work are carefully recorded and must be typewritten and presented to the faculty as a requirement for graduation.

### LABORATORY FEES.

In addition to the regular tuition-fee covering cost of board, room, etc., the student is required to pay:

Pharmaceutical Laboratory II. ....	\$20.00.
Pharmaceutical Laboratory II. and IV. ....	20.00.
Pharmaceutical Laboratory VII. and VIII.....	40.00.

## COURSES IN PHARMACY.

(DEGREES: Ph. G., Ph. C.)

## FIRST YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Materia Medica,	2	83	VII. I	Materia Medica,	2	83	VII. I
Pharmacy, . .	4	81	I.	Pharmacy, . .	4	81	I. II.
Chemistry, . .	2	74	I.a	Chemistry, . .	2	74	I.b
Botany, . .	5	78	I.	Botany, . .	5	78	I.
English, . .	5	40	I.	English, . .	5	40	I.
				Physics, . .	5	76	I.

## SECOND YEAR.

Pharmacy, . .	6	82	II. III. V.	Pharmacy, . .	6	82	II. IV. VI.
Chemistry, . .	5	74	II.	Chemistry, . .	5	75	III.
Materia Medica,	5	83	VII.	Materia Medica,	5	83	VII.2
Pharmacognosy	2	83	VII.3	Physiology, . .	5	86	I.

## THIRD YEAR.

Pharmacy, . .	5	82	VI.	Pharmacy, . .	5	82	VIII.
Chemistry, . .	7	75	IV.	Therapeutics,	2	83	VII.2
Bacteriology, .	3	87	I.	Toxicology, . .	5	75	V.
Mineralogy, . .	2	88	I.	Mineralogy, . .	2	88	II.
Thesis, . .							

Apply for a detailed catalogue of the Pharmacy College.

## SCHOOL OF ENGINEERING.



Three regular courses are offered: one leading to the degree of Civil Engineer, one to the degree of Mechanical Engineer, and another to the degree of Bachelor of Science in Electrical Engineering.

A special Short Course in Electrical Engineering is offered to accommodate those that wish to fit themselves for practical work in the shortest possible time.

A student should not take up any one of these courses unless he has a natural aptitude for mathematics. A liking for machinery and tools is of great advantage in Mechanical or Electrical Engineering.

Special attention is given to the practical work of Engineering in the laboratories and draughting rooms. The exercises in calculating, designing and constructing are made to conform as nearly as possible to the best modern engineering practice.

The various laboratories are equipped with the most approved forms of instruments and appliances and considerable time is given to technical work in the laboratories.

(For a list of available apparatus, see pages 14-15.)



In the schedule of studies one hour credit is given for each recitation or lecture which requires from one to two hours' preparation. Two hours actual time in laboratory work or drawing are required for each hour on the schedule.

## EXPENSES.

In addition to the regular fees for matriculation, board, tuition, lodging, etc., as given on page 26, the regular students in the three Engineering Courses are required to pay laboratory fees to cover, in part, the cost of materials consumed and the deterioration of the apparatus used, as follows:

## LABORATORY FEES.

Physical Laboratory III. ....	\$ 5.00.
Physical Laboratory IV. ....	15.00.
Electrical Laboratory I., II. ....	15.00.
Electrical Laboratory V. ....	20.00.
Shopwork, all four-hour courses, ....	15.00.
Chemistry, I., II., III., IV., VI., VII., each, ....	10.00.
Chemistry, V. ....	5.00.

## ADMISSION.

Candidates for admission to the Freshman Year must be at least 17 years of age. For advanced standing there must be a corresponding increase in the age limit.

## ENTRANCE EXAMINATIONS.

Written examinations in the following subjects required for admission will be held at the University on the first two days of the fall term at the beginning of the school year :

**Arithmetic**—Complete, including the metric system of weights and measures. Special importance is attached to accuracy in calculations and the practical application of rules.

**Algebra**—Fundamental operations, simple equations, involution and evolution, radicals, radical equations and quadratic equations, including everything up to logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises by other authors.

**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**History**—(a) United States.

(b) General outlines. See page 98.

**Geography**—Political and Physical, as much as is contained in the larger school geographies.

**Physics**—Elementary. The preparation on this subject should include a course of lectures, illustrated by experiments, and recitations from a text-book similar to *Carhart and Chute's*, or *Gage's*. Laboratory work is desirable but it is not required.

**Chemistry**—The elements of inorganic chemistry, as given in good high schools.

**Botany**—(*For Civil Engineering only.*) As given in elementary text-books.

**Physiology and Hygiene**—(*For Civil Engineering only.*) As given in elementary text-books.

**French and German**—(*Only one language is required.*) A knowledge of elementary grammar and an ability to read ordinary prose at sight. This should be acquired by the reading of about three hundred pages of annotated text, including historical narrative and popular science in connection with the study of grammar.

**English**—Part of the examination time is given for answering questions upon books marked *Group A*, the remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

If the applicant passes these examinations satisfactorily he may begin at once the regular Freshman work; but if he is deficient in one or more subjects he may enter conditionally and make up his deficiency as soon as possible in the Preparatory Department.

Those that are prepared to pass the entrance examination in German will take French in the Freshman and Sophomore Years, while if French is presented at the entrance examination German will be studied in the Freshman and Sophomore Years. The intention in either case is to give a reading knowledge of technical works.



## Introduction to the Course in Civil Engineering.



The Courses of instruction are designed to prepare students by a thorough and systematic training in the sciences and in the principles of Civil Engineering, to perform intelligently the duties of their profession either in the office or in some of the responsible positions superintending the construction and operation of public works. To secure these results the student is given, not only a sound theoretical training in the studies of the Courses, but he is also required to study the practical applications of the principles upon which the theory is based. The first two years are devoted to the study of Mathematics and the theoretical branches. The last two years are given to the study of the applied courses, practical work in the laboratory and field, so much as possible, being required throughout the course.

Sufficient instruction is given in French and German to enable the student to read easily and understandingly professional works in these languages; while the study of English is pursued until the student is qualified to prepare acceptable themes on professional subjects. Instruction based upon standard text-books is given throughout the course by means of lectures, recitations, practice in laboratory, drawing room, and field. This work is largely supplemented by assigning to the student, for solution, practical problems bearing directly upon the subject matter discussed in the class room and requiring original investigation, thus training the student to habits of independence and awakening his interest in the work of his course.

The Department is provided with all the instruments necessary for effective work in the different branches of field

Engineering. After the student is taught the use and adjustments of the instruments, surveys, elementary in character, are commenced and continued progressively until the more difficult principles and methods are understood. In a similar manner is instruction given in the Courses, Sanitary Engineering, Hydromechanics, Resistance of Materials, Bridges and Roofs, etc., thus familiarizing the student with practical Engineering subjects, and the most approved methods of execution and designing.

A Thesis on some approved subject connected with the course of study, is required of each student as a condition of graduation. The Thesis must embody the results of original research.

## Studies Prescribed for Civil Engineering.

(DEGREE: C. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	50	I.	Analytic Geom.	5	51	III.
Trigonometry,	5	50	II.	Surveying, .	5	53	II. III.
English, . .	5	40	I.	English, . .	5	40	I.
French or Ger.,	2	47-49	I.	French or Ger.,	2	47-49	II.
Chemistry, . .	3	74	I.	Chemistry, .	3	74	I.
Drawing, . .	3	71	I.	Drawing, . .	3	71	I.

## SOPHOMORE YEAR.

Calculus, . .	5	51	IV.	Calculus, . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
R.R. Surveying	4	54	VI. VII.	Adv. Surveying,	4	54	IV. V.
English, . .	1	42	V.	English, . .	1	42	V.
Physics, . .	3	76	II.	Physics, . .	3	76	II.
Drawing, . .	4	71	II. III.	Drawing, . .	4	72	III. V.
French or Ger.,	2	48-49	III.	French or Ger.,	2	48-49	III.

## JUNIOR YEAR.

Analytic Mechanics,	5	55	VIII.	Mechanics of Materials, .	5	55	IX.
Astronomy,	3	60	I.	Astronomy, .	3	60	I.
Geodesy, . .	4	59	XVIII.	English, . .	1	42	V.
English, . .	1	42	V.	Geology, . .	4	88	III.
Geology, . .	4	86	I.	Stereotomy, .	2	58	XIV.
Drawing, . .	4	72	V.	Drawing, . .	2	72	VI.

## SENIOR YEAR.

Engineering,	5.	57	XIV.	Engineering,	5	57	XII.
Drawing, . .	4	72	VI.	Hydromechan.,	3	58	XIII.
Bridges, Roofs,	3	56	X.	Graph. Stat.,	5	56	XI.
Sanitary Eng.,	2	57	XIII.	Steam Boilers,	3	62	IV.
Hydromechan.,	3	58	XIII.	Thesis Work,			

## Introduction to the Course in Mechanical Engineering.



The Course in Mechanical Engineering, leading to the degree of Mechanical Engineer, is given to those young men that wish to prepare themselves for the designing of machinery, with its appurtenances, and for the successful management of power-plants. As the course requires a thorough knowledge of Pure and Applied Mathematics, as well as of Physics, only those capable of adapting themselves to these requirements should take it up. The course is modeled in the twofold belief that a thorough fundamental training is essential to success in engineering, and that this training is best secured by a study of the practical application of the principles involved, as well as of the theoretical principles.

The work of the department, conducted in connection with other departments elsewhere described, consists of the study, by text-book or lectures, of the materials used in Mechanical Engineering, accompanied by the science of pure mechanical kinematics, which traces the motions of connected parts without reference to the cause of such motions or to the work done or energy transmitted. This is succeeded by machine design, which is a direct development of kinematics, and the course continues throughout the Junior and Senior Years.

The Courses in Shopwork are most complete. The first years' work is confined to practice in the woodshop, in which the principles of carpentry, turning, and pattern-making are taught. When students have become sufficiently

skilled in woodwork, they take up the work of the foundry, blacksmith shop, and machine shop. During the ensuing year the advanced students will undertake the construction, from an original design, of a rotary steam engine. A systematic course of training is provided, which advances the student by easy steps until he has mastered all the details of the art.

The latter part of the Senior Year is largely taken up in the preparation of a Graduating Thesis. Here especially the student is taught to depend as much as possible upon his own resources and abilities in exercising his ingenuity. It is the culminating effort of the Course, embodying the chief results, and is expected to show considerable originality.

(For the equipment of the shops in which the courses are given, see  
Page 18.)

# Studies Prescribed for Mechanical Engineering.

(DEGREE: M. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra . . .	5	50	I.	Analyt. Geom.,	5	51	III.
Trigonometry,	5	50	II.	English, . . .	5	40	I.
English, . . .	5	40	I.	French . . .	2	47	I.
French . . .	2	47	I.	German, . . .	3	49	II.
German, . . .	3	49	II.	Drawing, . . .	3	71	II.
Drawing, . . .	3	71	I.	Chemistry, . .	2	74	I. b
Chemistry, . .	3	74	I. a	Shopwork, . . .	5	64	X. a

## SOPHOMORE YEAR.

Calculus, . . .	5	51	IV.	Calculus, . . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
Drawing, . . .	2	71	II.	Drawing, . . .	3	71	II.
English, . . .	1	42	V.	English, . . .	1	42	V.
French, . . .	2	48	II.	French, . . .	2	48	II.
Chemistry, . .	5	74	II.	Chemistry, . .	5	75	III.
Physics, . . .	3	76	II.	Physics, . . .	4	76	II. III.
Shopwork, . .	4	64	X. b.	Shopwork, . . .	4	64	X. c.

## JUNIOR YEAR.

Analytical				Mech's of Eng.	5	55	IX.
Mechanics, . .	5	55	VIII.	Machine design	3	63	VI.
Kinematics, . .	5	62	V.	Valve Gears,	2	63	VII.
English, . . .	1	42	V.	Electrical Eng.	2	64	III.
Drawing, . . .	3	72	IV.	English, . . .	1	42	V.
Physics, . . .	3	77	IV.	Drawing, . . .	3	72	IV.
Shopwork, . .	5	64	X. d	Shopwork, . . .	5	64	X. c.

## SENIOR YEAR.

Materials of				Thermodynam,	5	61	I.
Engineering,	5	61	II.	Steam Engine			
Thermodynam,	5	61	I.	Design, . . .	5	62	III.
Steam Engine				Steam Boilers,	3	63	IV.
Design, . . .	5	62	III.	Thesis, . . .	12	64	IX.
Mechani'l Lab.	3	63	VIII.				
Shopwork, . .	5	64	X. e				

## Introduction to the Course in Electrical Engineering.



The remarkable development of electrical industries during the past few years has created a demand for men skilled in the theory and practice of Electrical and Mechanical work. The study of the subjects arranged on the following page is intended to give a general education as well as special training in the technical branches involved in the various practical applications of electricity in industrial pursuits.

General theory is given in lectures and by recitations from standard text-books. In the laboratories and shops the operations explained in the class room are performed by the student, in which he acquires some skill in handling tools and instruments, and obtains a working knowledge of the principles involved. Careful records of the work done in the laboratories are kept by the student and are handed in for suggestions and corrections at the end of every week.

(For requirements of admission, degree, etc., see pages 102-103.)

### THESIS.

Each candidate for a degree is required to prepare during the Senior Year an acceptable Thesis embodying the results of an extended original research on an Engineering subject, chosen at the beginning of the year, with the approval of the head of the department. The descriptive part must be typewritten and the drawings carefully made on white cardboard.



# Studies Prescribed for Electrical Engineering.

(DEGREE: B. S. in E. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra . . .	5	50	I.	Analyt. Geom.,	5	51	III.
Trigonometry,	5	50	II.	English, . . .	5	40	I.
English, . . .	5	40	I.	French . . .	2	47	I.
French . . .	2	47	I.	German, . . .	3	49	II.
German, . . .	3	49	II.	Drawing, . . .	3	71	II.
Drawing, . . .	3	71	I.	Chemistry, . .	2	74	I. b
Chemistry, . .	3	74	I. a	Shopwork, . . .	5	64	X. a

## SOPHOMORE YEAR.

Calculus, . . .	5	51	IV.	Calculus, . . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
Drawing . . .	2	71	II.	Drawing, . . .	3	71	II.
English, . . .	1	42	V.	English, . . .	1	42	V.
French, or Ger.,	2	48-49		French, or Ger.,	2	48-49	
Chemistry, . .	5	74	II.	Electricity and			
Physics, . . .	3	76	II.	Magnetism,	2	66	III.
Shopwork, . .	4	64	X. b.	Physics, . . .	4	76	II. III.
				Shopwork, . . .	4	64	X. c.

## JUNIOR YEAR.

Analytical				Mech's of Mat.	5	55	IX.
Mechanics,	5	55	VIII.	Machine design	3	63	VI. VII.
Kinematics, . .	5	62	V.	English, . . .	1	42	V.
English, . . .	1	42	V.	Drawing, . . .	3	72	IV.
Drawing, . . .	3	72	IV.	Physics, . . .	3	77	IV.
Physics, . . .	3	77	IV.	Shopwork, . . .	5	64	X. e.
Shopwork, . . .	5	64	X. d.				

## SENIOR YEAR.

Dynamo				Dynamo			
Machinery,	5	66	IV.	Machinery,	5	66	IV.
Thermodynam.	5	61	I.	Thermodynam,	5	61	I.
Electrical Lab.,	5	66	V.	Electrical Lab.,	5	66	V.
Drawing, . . .	3	67	VI.	Drawing, . . .	3	67	VI.
Thesis, . . .				Thesis, . . .			

## Short Course in Applied Electricity.



Students that do not wish to take the languages and higher mathematics required in the regular four-year course should enter this shorter course, which may be completed in two years. It is arranged to give an accurate knowledge of the fundamental theories of electricity and magnetism, as well as a certain amount of skill in handling electrical machinery and appliances. Simple algebra, geometry, trigonometry, and elementary physics and chemistry are included, for they are necessary in order to carry on successfully the practical work of designing, manufacturing, and testing or operating electrical apparatus. Training in this practical work is given in the draughting room, the machine shops, and in the electrical and physical laboratories.

The actual conditions of the commercial application of electricity to the distribution of light and power are learned by testing, repairing, and making additions to the University plant and by visiting the numerous electric plants in the vicinity, accompanied by an instructor.

The study of the principles of mechanical drawing is taken up early in the course and sufficient practice is given to enable the student to make working drawings and to follow them in the construction of apparatus in the shops and laboratories.

Applicants for admission to this Course should be at least seventeen years of age. They should have a fair knowledge of the subjects taught in the common schools, especially arithmetic.

When the required studies have been satisfactorily completed, a certificate stating that fact is issued.

## Studies Prescribed for Short Course in Applied Electricity.

### FIRST YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	162	*	Algebra, . .	5	162	†
Drawing, . .	3	71	I.	Geometry, . .	5	163	‡
Shopwork, . .	3	64	X. a	Drawing, . .	4	71	II.
Physics, . .	3	76	I.	Shopwork, . .	5	64	X. b
Chemistry, . .	2	163	†	Physics, . .	2	76	I.
Electricity, . .	5	65	I.	Electricity, . .	5	65	I.

### SECOND YEAR.

Trigonometry,	5	50	II.	Analytic			
Drawing, . .	3	72	VI.	Geometry,	5	51	III.
Shopwork, . .	3	64	X. c	Drawing, . .	3	72	VI.
Electricity, . .	5	65	II.	Shopwork, . .	3	64	X. d
Electrical				Electricity, . .	5	65	II.
Construction,	5	65	II.	Electrical			
				Construction,	5	65	II.

\* Second term, second year.

† First term, third year.

‡ First term, third year.

‖ First term, third year.

## COURSE IN ARCHITECTURE.



### ADMISSION.

Candidates for admission to the Freshman Year must be at least 17 years of age. For advanced standing there must be a corresponding increase in the age limit.

### DESCRIPTION OF THE COURSE.

Those subjects that are not taught in the architect's office but which are necessary for an architect are especially insisted upon in this course.

The work is technical and freehand drawing is thorough, and the student is prepared for the expression of his architectural plans.

In construction and practice the courses prescribed for the students in the civil and mechanical engineering schools are followed with special application to architectural requirements. The æsthetic part of the work thus has a practical and exact basis.

The history of architecture is taught by lecture and illustrations.

The material equipment consists of plaster models, engravings and photographs of noted buildings, books on architecture, and the apparatus of the engineering and art schools.

## COURSE IN ARCHITECTURE.

(DEGREE: Bachelor of Science in Architecture.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	50	I.	Analytic Geom.	5	51	III.
Trigonometry,	5	50	II.	English, . .	5	40	I.
English, . .	5	40	I.	French or Ger.,	2	47-49	
French or Ger.,	2	47-49		Mech. Drawing,	2	71	II.
Mech. Drawing,	2	71	I.	Artistic Draw'g,	5	69	I. c I. d
Artistic Draw'g,	5	69	I. a I. b	Chemistry, .	2	74	I. b
Chemistry, . .	3	74	I. a	Shopwork, . .	5	64	X. a

## SOPHOMORE YEAR.

Calculus, . .	5	51	IV.	Calculus, . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
Mech. Drawing,	3	71	II. III.	Mech. Drawing,	4	71	II. III.
Artistic Draw'g,	5	70	II. a	Artistic Draw'g,	5	70	II. a
English, . .	1	42	V.	English, . .	1	42	V.
French or Ger.,	2	47-49		French or Ger.,	2	47-49	
Physics, . .	3	76	II.	Physics, . .	4	76	II. III.
Shopwork, . .	4	64	X. b	Shopwork, . .	4	64	X. c
Ap. Electricity,	3	65	I.				

## JUNIOR YEAR.

Analytic Mech.	5	55	VIII.	Mech. of Mat'ls	5	55	IX.
English, . .	1	42	V.	English, . .	1	42	V.
Geology, . .	4	88	I.	Geology, . .	5	83	III.
Mech. Draw'g,*	4	72	VI.	Mech. Draw'g,*	4	73	VII.
Artistic Draw'g,	5	70	II. b	Artistic Draw'g,	5	70	II. b
Roof Trusses,	3	56	X.	Roof Trusses,	3	56	X.

## SENIOR YEAR.

Arch't Design,†	10	67	II.	Arch'l Design †	10	67	II.
Contracts, . .	1	144	I.	Photography,	2	68	IV.
Specifications,	1	67	III.	Stereotomy, .	2	58	XV.
Hist. of Arch'e,	3	67	I.	Hist. of Arch'e,	3	67	I.
Surveying, . .	5	53	II. III.	Vent. & Heat'g	1	57	XIII.
Foundations,	1	57	XII.	Graph. Statics,	3	56	XI.
Thesis Work,				Thesis Work,			

\* Pen-and-ink and Water-color rendering are applied in this work.

† In this course is included work done in Course III., page 70.

School of Law.

## FACULTY.



REV. ANDREW MORRISSEY, C. S. C.,  
President of the University.

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WILLIAM HOYNES, LL. D., DEAN,  
International Law, Equity Jurisprudence and Pleadings,  
Common Law Pleadings, Real and Personal  
Property, Evidence, Domestic Relations,  
Contracts, Torts, etc.

HON. LUCIUS HUBBARD, LL. D.,  
Code Pleadings and Practice.

ABRAHAM L. BRICK, LL. M.,  
Criminal Law.

HON. TIMOTHY E. HOWARD, LL. D.,  
Appellate Jurisdiction of Courts of Last Resort.



## SCHOOL OF LAW.



For several years a systematic movement has been in progress under the auspices of the bench and bar of the country to promote the efficiency and welfare of the legal profession, and to make it as learned in fact as it is by repute. The most essential preliminary step to this end, as lawyers generally agree, is to prescribe requirements and examinations more comprehensive and rigorous as a test of qualifications for

### ADMISSION TO THE BAR.

Upon the law departments of universities, or law schools, as they may collectively be called, the profession must mainly depend for co-operation and success in this laudable undertaking. In fact, due acknowledgment of the importance of their services is made as follows in a former report of the Committee on Legal Education of the American Bar Association:

“The benefits which law schools offer are easily suggested, and are of the most superior kind. They afford the student an acquaintance with general principles, difficult if not impossible to be otherwise obtained; they serve to remove difficulties which are inherent in scientific and technical phraseology, and as a necessary consequence they furnish the student with the means for clear conception and accurate and precise expression. They familiarize him with leading cases, and the application of them to discussion. They give him the valuable habit of attention, teach him familiar maxims, and offer him the priceless opportunities which result from contact and generous emulation. They lead him readily to survey the law as a science, and imbue him with the principles of ethics as its true foundation. Disputing, reasoning, reading, and discoursing, become his constant exercises; he improves remarkably as he becomes acquainted with them, and obtains progress otherwise beyond his reach.”

According to the late Chief Justice Waite, of the United States Supreme Court, "Law schools are now a necessity." And, in his work entitled "The American Commonwealth," Professor Bryce attributes the progress in learning and professional attainments of American lawyers "to the extraordinary excellence of many of the law schools."

It is probably well that the Professor qualifies his statement by using the word "many," instead of "all," in referring to the work of the law schools of the country, for not a few of them have been derelict and lacking in wholesome zeal to co-operate in elevating the standard of professional learning and ethics. Some of them still permit persons deficient even in the rudiments of a liberal education to become candidates for diplomas. Their attitude in this respect would seem to indicate that a large attendance and substantial revenue are placed paramount in the scale of importance to substantial results in the equipment and training of students. Such of these as manage without further preparation to secure admission to the bar almost necessarily commit gross mistakes in the technical work of the profession, and, in consequence, clients are wronged, judges embarrassed and courts delayed. While it is true that many of them abandon the practice after a precarious experience and turn to pursuits for which they are better qualified, yet the step is attended in some measure with disappointment and humiliation, not to mention the comparative loss of time and means incident to preparing for examination and waiting vainly for success at the bar.

The movement in progress to protect and promote the interests of the legal profession has spread sufficiently of late to become an obstacle to the continuance of these abuses, exceptional though they be. Hereafter such law schools as receive students indiscriminately, without particular regard to their educational standing, maintaining a loose system of

instruction and permitting loose methods of study, must in most States, at any rate, suffer the humiliation incident to the rejection as incompetent of their graduates by the examining boards designated to pass upon the qualifications of applicants for admission to the bar. This movement is salutary in all respects, and law schools that fail to conform to it in the duration and thoroughness of their courses of instruction have no valid claim upon the patronage of students or the confidence of the public.

It is becoming more difficult year by year successfully to meet the requirements and pass the examinations prescribed for admission to the bar, and law schools are bound to take cognizance of the fact and correspondingly broaden and strengthen their courses of instruction. A few years ago it was far less difficult than it is at present to enter the ranks of the profession, and the decided tendency is to make even more exacting the test of qualifications for membership. With this tendency uninterrupted, the profession gives promise of attaining to its coveted ideal in learning, ethics and efficiency.

And here it is in order to refer more particularly to

### THE SYSTEM OF INSTRUCTION

in the Law Department of the University of Notre Dame, although, of course, it is included in general terms in what has been stated regarding the duty of law schools to aid in promoting the laudable aims and general welfare of the legal profession.

Referring briefly to the prevailing methods of instruction in the different law schools, it may be stated that in some of them the text-book system is exclusively followed, and the students read and recite daily an assigned lesson of a given number of pages; in others the lecture system obtains, as in

European universities, and students familiar with phonography may take notes and sufficiently study the same to be able in subsequent examinations to answer questions bearing upon the subjects studied; in a few others, taking as guide a noted Eastern university, case reading is the favored system, and students study books of selected cases treating of different branches of the law, with a view to reciting them in outline or writing a brief digest of the points involved; in certain other schools an effort has been made to combine some of the distinctive features of case reading and text-book work or lecturing, and a mixed system, as it may be called, exists in them. At Notre Dame, however, none of these systems is exclusively followed. And yet the best features of all are comprised in the curriculum here preferred. It is believed, in short, that nowhere in the country is the course in law more comprehensive, thorough and practical than at this University.

Case reading is usually taken up early in September year by year, and continued long enough to enable students to understand, analyze and criticize the cases assigned to them for study and recitation. The difficulties usually encountered by beginners in the work are readily surmounted by the aid of lectures and explanations. In a course of about seventy-five hours students ordinarily become familiar with a number of the leading cases and learn to recognize features of strength or weakness in the opinions of the courts. They learn also to distinguish dicta from the logical sequence of thought in dealing with the proper subjects of judicial determination, and recognize promptly the qualifying or weakening effect of a dissenting opinion, where such is filed by a minority of the judges. Moreover, after familiarizing themselves in that way with cases, they are advised and expected to read the authorities cited daily in class, whether in the text-books, lectures, or quizzes. In the preparation

also of written theses from month to month, comprising on an average about ten pages of legal cap, they must necessarily consult and cite them. In moot-court work likewise they are prompted in their foretaste of forensic contests by a strong emulation to make a careful study of the pertinent portions of text-books and digests and the cases in the reports, and thus they are enabled intelligently to marshal the authorities upon which they depend for success in the maintenance of their respective contentions. In this way it may be possible for them to acquire without conscious loss of time a more accurate and serviceable knowledge of the practical force, effect and merit of the reported opinions than do those who give their time exclusively to the somewhat incoherent and fragmentary system of case reading.

In examinations for admission to the bar the courts of some States require applicants to furnish lists of the text-books studied by them, and such of these applicants as have merely attended lectures or studied cases, instead of reading text-books, encounter danger of being declared ineligible to stand as candidates for examination, even though they might creditably acquit themselves in it. If they undertake to explain how the law may be learned without studying a certain number of text-books, they find the examiners inclined to listen incredulously, if not openly and positively to express doubt or dissent. And if they ask credit for the work done, it is likely to be given so sparingly as to cause disappointment and discouragement. As some of the law students at Notre Dame come from States in which this test is applied in examinations, the use of text-books is deemed advisable, if not necessary. But there are other reasons for using them. It has been found, for example, that so many mistakes are made by the average student in taking notes of lectures that his notes are sometimes unintelligible or misleading, and consequently practically worthless for future



reference. While it is true that this objection might be removed by resorting to the slow, if not tedious, process of dictation, time being thus given the students to commit fully and accurately to writing all the important principles contained in the lectures, yet this method of instruction would manifestly be impracticable under present conditions in a domain so extensive as the law. Moreover, the books used by students become peculiarly available in their subsequent practice. Remembering more or less clearly the contents, they can turn more readily than they could with books they had not studied to the pages that elucidate the questions with which they may afterwards have to deal at the instance of clients. In some law schools lectures have been taken in full by certain students skilled in phonography, and then typewritten and sold at so much a page to other members of the class, but this practice has fallen into disfavor and disuse, having proved to be very unsatisfactory and more costly than the purchase of text-books.

The lecture or dictation system alone may be pronounced antiquated and impracticable for the reasons already stated, but in combination with text-book work, case reading and daily examinations, its great value and practical utility cannot be impugned. At Notre Dame it forms an important factor in the law curriculum. Each subject is fully covered by lectures, text-book work, daily and bi-monthly examinations, monthly theses, the reading of pertinent cases and weekly trials in the moot and other courts of the Law Department.

This course of instruction is comprehensive, thorough, and practical. It is not and cannot be excelled. It may be stated without qualification or reserve that the earnest and industrious student can accomplish twice as much in a given time at Notre Dame as he can in an office or at home. With comparative immunity from the distractions and

temptations of city life, he can give his entire time to study and necessary recreation. In short, he can here study a greater number of hours and do more class-work day by day than probably anywhere else in the entire country.

The authorities of the University, it may be repeated, are sincerely in sympathy with the efforts now making in educational and legal circles to raise to the highest plane practicable

### THE STANDARD OF PROFICIENCY

for graduation in law and admission to the bar. However, they aim to be guided in the matter by the dictates of sound reason. They know that a great number of worthy and capable young men who desire to qualify themselves for the legal profession are prevented by circumstances from completing the studies of a collegiate course before an age that seems to make imperative the obligation of beginning without delay the study of law. Such young men, many of whom may be actively engaged in business, in teaching, in journalistic work, and the like, are almost necessarily driven to the chaotic and discouraging study of the law in offices, if denied indulgent consideration by the institutions of higher learning.

It is conceived to be the duty of a university to do all the good it can to as many as possible, consistently with its curriculum and standing; and to that end it ought to aid and encourage, to the full limit of its opportunities, worthy and upright, honest and capable young men who manifest an earnest desire to qualify themselves for a useful and creditable career in the higher walks of professional life. With a view to doing its full share in this regard, the University of Notre Dame will welcome to its halls and its classes every deserving young man who desires to pursue and become proficient in the study of the law. However, if his standing



in general education or collegiate work be not sufficiently advanced to enable him to undertake with profit the studies of the Junior year in law, he may enter the Elementary class, the members of which are given instruction in the fundamental principles of the law for an hour each day. The remainder of his time is devoted to study and recitation in such of the collegiate courses as, in the opinion of the authorities, may prove most useful and helpful in qualifying him to enter as speedily as practicable upon the studies of the Junior and Senior classes.

A faithful discharge of the duties devolving upon students in these classes will demand their entire time. Every hour of the day can be devoted profitably to the work assigned to them. Even the postgraduate students, who have only law work to do, find that this keeps them very busy. And yet it seems that, in an indulgent spirit, an exception ought to be made in the interest of such students as by previous study in other law schools, or law offices, or actual practice as attorneys, have acquired the right to be credited with work acceptably done or advanced standing in the course. It is deemed only fair and proper to allow such as these to take electively any additional studies they may choose in the regular or special courses of the University. But this option may not be exercised without permission and reasonable assurance that it will not interfere with the work prescribed for students of the Law Department. The rule requiring regularity in class attendance is imperative. Once students enter a class they are expected to remain in it for the session at least, faithfully performing the duties it imposes upon them. They may thus, by coming to Notre Dame to complete their legal studies, materially add to their attainments in any other branches of knowledge likely to be helpful to them in their practice as lawyers.

This fact tends pertinently to illustrate the special advantages to be derived from studying law at a university. There the educational atmosphere is elevating, broadening, exhilarating. It awakens an invigorating spirit of emulation. It encourages the exercise of all the faculties and intellectual powers. It serves as a potent and wholesome force in the development of mind and body. The impressive lesson it inculcates relative to the past, the present and the future—the manifold duties of life—necessarily directs the thoughtful to paths of knowledge and usefulness. It awakens life-directing forces that else would perhaps ever lie dormant. It tends to turn thought and action toward high ideals, aspiring scholarship, sturdy self-reliance and increasing power and influence at the bar.

Students who do not intend to practice law or become candidates for the degree of LL. B., but wish simply to add to their educational acquirements a knowledge of the

### FUNDAMENTAL PRINCIPLES OF THE LAW

may at any time during the year, with proper permission, have their names enrolled on the list of students in the Elementary class of this Department. No extra expense is thereby entailed. However, such students must be sufficiently advanced in age and education to justify the belief that they can understand and appreciate instruction in the law.

The number of such students is likely to increase steadily, for year by year it is becoming more manifest that an education is not complete without a knowledge of at least the elementary principles of the law. Many a man in trade has had to face financial ruin on account of want of acquaintance with the fundamental legal principles. Although in theory, at least, every person is presumed to know the law, yet many a man has, by an inconsiderate act, due to his ignorance of it, forfeited claim to the protection of the courts and the

vindication of his rights. Many a person has been forced to do exactly the contrary to what he intended through his failure to understand the essential elements of a contract. Many a one has been compelled to pay heavy damages for personal injuries caused by negligence, or failure to perform a duty, or improper performance of it, where no liability would exist if the "law of torts" had been known and observed. As the law is over and around every creature from the first moment of his being until the grave closes upon him and his estate is settled, it would be impossible to overestimate its utility and importance. Indeed, there is no study that can at all compare with it in practical utility, in training the mind to accuracy of observation, and in strengthening the judgment.

A period of three years is prescribed for under-graduates in the

### COURSE OF STUDY

in the Law Department of this University. It leads when satisfactorily completed to the degree of LL. B. The Postgraduate course comprises an additional or fourth year, and leads to the degree of LL. M. By its charter this University is empowered to confer these and all other degrees appertaining to the courses of study in educational institutions of the highest rank. There is no university that has greater power under the law in this respect. The undergraduate students of the Law Department are divided into three classes, corresponding to each year of the course leading to the degree of LL. B. They are known respectively as the Elementary, Junior and Senior classes. The Postgraduate course is for students who have received that degree and aim at attaining by further study and practical work to a higher order of proficiency. A full year of study in each class is obligatory. Moreover, the students must

pass a satisfactory general examination at the close of each scholastic year. This test is indispensable as a condition of promotion in the Elementary and Junior classes and as evidence of qualifications for graduation in the Senior class. The subjects of study and the work to be done in each class may briefly be outlined:

### ELEMENTARY CLASS—FIRST YEAR.

An hour daily is given to instruction, recitation and work in the class-room during the first year. The class-room, commodious and well-appointed, is in the main building. The regular course of instruction consists in text-book work, lectures, quizzes, written exercises and attendance weekly at moot-court trials and society meetings. The books primarily used are *Blackstone's and Kent's Commentaries*. Such other works on elementary law are also used as, from time to time, seem best adapted and most available for purposes of instruction. Of these mention may be made of *Walker's American Law*, *Smith's Elementary Law*, *Munson's Elementary Practice*, *Keener's Selections on Jurisprudence*, *Holland's Elements of Jurisprudence*, *Fishback's Manual of Elementary Law*, and the like. Such of these as may seem most available for class purposes at any particular time may be studied in addition to the books primarily used. The recently published edition of *Blackstone's Commentaries*, by *Dr. William Draper Lewis*, is justly regarded as the best and most complete known to the profession, although the chart feature of *Blickenderfer's Abridgment of Blackstone* is much appreciated by students. *Browne's Blackstone*, too, is a carefully prepared summary in one volume of the essential elements of the original work. *Browne's Edition of Kent's Commentaries* is also a useful summary in one volume of the original treatise. However, it is usually safer for students to purchase their books after

joining the class, for uniformity is thus assured, as well as a reduction in price. This suggestion applies not only to the Elementary, but also to the other classes.

Persons who desire to become members of this class must be at least eighteen years of age and entitled to collegiate standing in their general education. However, ample opportunity is afforded them to pursue such additional studies as may seem useful in preparing them for a successful career in the law. For example, a knowledge of Latin, Logic, History, Belles-Lettres, Political Economy, and the like, would be very helpful to them. Other subjects also, in which they may either regard themselves as deficient or wish to excel, may likewise be entered on their lists of studies. Should it be deemed necessary or advisable for them to perfect themselves in these studies, whether one year or several years be requisite, it would be entirely practicable meanwhile to attend the exercises of the Elementary class. Work thus done would necessarily serve to broaden and deepen the foundation of subsequent work in the Junior and Senior years, making it peculiarly effective and promising. The work done in this class is exceptionally instructive and interesting for beginners, and there is sufficient change in it annually to sustain interest and make attendance profitable, though continued for two or more years.

### JUNIOR CLASS—SECOND YEAR.

When a student enters this class his close attention, and earnest thoughts, and best efforts must be directed exclusively, with seldom an exception, to the study of the law. He must attend class exercises at least three hours daily. This he must do for the entire scholastic year. Otherwise he cannot be regarded as entitled to promotion to the Senior class or as a candidate for graduation. He must do the full



work of the year if he would advance with his class and share its honors.

If the student be a collegiate postgraduate in the Classics, Sciences, Letters, or the like, or has attained to equivalent acquirements by work and experience in professional pursuits, or lines of thought and study kindred to the law, he may be eligible primarily to membership in this class. In such case it would be necessary for him to undertake and perform the most essential work of the Elementary class in addition to his other duties. The practicability of the undertaking may be inferred from the fact that it is sought to do in this class fully the work of a year and a half, as gauged by the curricula of other educational institutions. That this has been done in many instances cannot be doubted, although there has never been special reference to any other institution, with a view to competition or as an incentive to exceptional effort. Presumably the result is due to a progressive system of instruction, more classes daily, a greater number of hours for study and the purpose of each member of the Faculty to do his best in the performance of duty. But, notwithstanding these facts, it is necessary for many of the students, no matter how well advanced or finished their education, to take the full course of three years. The fact that they might accomplish in two years all that is ordinarily done in three, makes no difference. This is due to the action of courts and legislatures in several States. A rule has been established requiring three years of actual study of the law as a prerequisite to applying for admission to the bar. Persons from these States must take the full three years' course, including the Elementary class. However, if their general education be finished, and it seem superfluous to do further collegiate work, they may select in preference the Junior, Senior and Postgraduate years as covering the time required for study in their States. Of

course, this question will not arise in States that require only two years of study, and students from such States who are entitled to postgraduate standing ought to be able to do in two years the ordinary work of three, and thus qualify themselves in that time to undergo without difficulty the most rigorous examination for admission to the bar.

In arranging the course of study it is sought to take subjects in their logical sequence. The less difficult, though by no means the less important, come in the Junior year, while the more technical are dealt with in the Senior year, except in the case of Pleadings and Evidence. A knowledge of these renders moot court work intelligible and profitable to an exceptional degree, and hence they enter into the plan of instruction in the Junior year. The moot court practice is an important factor in the course of instruction for all the classes, and there can be no question regarding the advisability of learning and applying the rules of pleading and evidence at as early a date as practicable. Following are the chief subjects of study in the Junior year and the names of some of the authors of text-books dealing with them:

**The Common and Statutory Laws, with Exercises in Case Reading and Statutory Construction.**

*Black on Interpretation of Laws, Bishop's Written Law, Sutherland on Statutory Construction, Curtis' Federal Statutes.*

**Persons and Domestic Relations.**

*Tiffany, Dwight, Schouler Reeves.*

**The Law of Contracts.**

*Clark, Lawson, Bishop, Beach, Anson, Parsons.*

**The Law of Torts.**

*Hale Jaggard, Cooley, Hilliard, Addison, Bishop's Non-Contract Law.*



**Criminal Law and Procedure.**

*Clark, Bishop, Heard, May, Hawley & McGregor, Washburn, Wharton, Stephen.*

**Medical Jurisprudence**

*Reese, Beck, Dean, Taylor.*

**Common Law Pleadings.**

*Shipman, Gould, Stephen, Shinn, Heard, Chitty.*

**Code Pleadings and Practice.**

*Bliss, Maxwell, Boone, Works, Thompson on Trials, Elliott's General Practice, Elliott's Appellate Procedure, Foster's First Book of Practice.*

**Evidence.**

*Jones, Underhill, McKelvey, Greenleaf, Wharton, Reynolds, Roscoe, Wharton, Starkie, Stephen, Best.*

**Sales.**

*Tiffany, Tiedeman, Benjamin.*

**Insurance.**

*May, Elliott, Wood, Bliss.*

**Agency.**

*Mecham, Evans, Story, Wharton.*

**Partnership.**

*Bates, George, Lindley, Parsons, Pollock.*

It would be supererogatory to enumerate the subdivisions or branches of the subjects mentioned. All of them, however, receive due attention and are fully explained. And it may be stated that, with a view to enabling students to obviate the expense of purchasing many books, subjects of brief compass are taught, as may seem practicable, by means of lectures, case reading, quizzes, theses and moot court

trials. But should text-books be preferred at any time, resort may be had to their use.

### SENIOR CLASS—THIRD YEAR.

So much of what has been stated with reference to the preceding classes is applicable also to students of the Senior year that it will be unnecessary to enlarge on the nature of their work. A detailed description of it might involve repetition to some extent, and become tedious. Those eligible to membership are such as have satisfactorily finished the studies of the first and second years and earned the right to promotion. However, in compliance with a custom generally recognized, lawyers in good standing who desire to join the class, in order to broaden and systematize their knowledge of the law, are also admitted to it. On passing a satisfactory examination at the end of the year they become, like other students, entitled to the degree of LL. B. And the same courtesy is extended to students of good moral character who have acceptably finished the work of two years in law schools or law departments of other universities. The leading subjects of study, together with the names of the authors of some of the text-books treating of them, are here presented:

#### Equity Jurisprudence.

*Fetter, Tiedeman, Bispham, Snell, Story, Adams.*

#### Equity Pleadings and Practice.

*Shipman, Shinn, Story, Lube.*

#### International Law.

*Glenn, Hall, Story, Vattel, Woolsey, Wheaton, Wharton.*

#### Constitutional Law.

*Black, Cooley, Von Holst, Desty, Story, Hamilton, Madison and Jay in the Federalist.*

**Private and Municipal Corporations.**

*Clark, Elliott, Beach, Field, Angell & Ames, Dillon, Tiedeman, Wild.*

**Personal Property.**

*Tiedeman, Darlington, Schouler, Smith, Williams.*

**Real Property.**

*Hopkins, Tiedeman, Boone, Washburn, Willard, Williams.*

**Wills, Executors and Administrators.**

*Croswell, Redfield, Jarman, O'Hara, Wigram.*

**Bailments and Common Carriers.**

*Hale, Hutchinson, Edwards, Schouler, Story.*

**Negotiable Instruments or Commercial Paper.**

*Norton, Tiedeman, Daniel, Cholmers.*

**Suretyship and Guaranty.**

*Brandt, Baylies, De Colyar, Pitman.*

The subdivisions of the principal subjects indicated in the preceding list are, of course, included in the general terms designating these subjects, and it is unnecessary specially to enumerate them. For example, it would be superfluous to refer specifically to Arbitration, Demand, Estoppel, Injunction, Insolvency, Notice, Protest, Assessment, Taxation, Mandamus, Quo Warranto, Ultra Vires, Recoupment, Set-off, Counterclaim, and the like, for they are fully considered and explained in connection with the subjects to which they relate.

The subjects of study are not necessarily taken, one by one, in consecutive order, as given in the list. Three or four of them may engage the attention and demand the work of the class at the same time. To illustrate: The class meets for recitation three or four times daily, say once or

twice in the forenoon and twice in the afternoon. International Law may be chosen for the morning hour, special work in office business or court practice afterward, Equity Jurisprudence the first hour in the afternoon and Equity Pleadings later. Once a subject is chosen for a particular class, whether first, second or third in the daily routine, it is continued exclusively in the same class, without break or interruption, until finished. In the case supposed, Constitutional Law would probably follow International Law in the morning hour; the special work would still remain such, though changing in its development; Real Property might succeed Equity Jurisprudence in the afternoon, and Personal Property follow in the evening. The students meet twice a week with those of the Postgraduate course for the special work indicated, which consists in conveyancing, preparation of pleadings, the manner of taking appeals and office business generally. The Senior students are expected to devote from eighteen to twenty hours a week to class work.

By the system outlined in the foregoing paragraph it is sought to keep each subject before the mind of the student until he takes interest in and understands it. Thus it becomes distinctively and permanently fixed in the mind. The practice of teaching to the same class one subject one day, another the next, and still another the day following, as where non-resident professors, each with a different subject, follow daily one the other, finds no encouragement at Notre Dame. Such blending of subjects and intermingling of principles manifestly tend to confusion of thought and chaos of subject-matter. It is very difficult in such case to see and understand the law as a symmetrical whole—a system majestic and beautiful in its harmonious entirety.

## POSTGRADUATE COURSE—FOURTH YEAR.

Only graduates in law can be admitted to this course. But these may be from any other university in good standing, as well as from our own Law Department. A year can very profitably be given to the work prescribed for graduation in it. The degree conferred is that of Master of Laws. The work of this course is eminently practical and of the greatest possible utility to those who intend to engage in the practice of law on their own account at an early date, and not to give two or three years of probation to the drudgery of a clerkship at small salary in some office.

Every year of study greatly increases the interest of the student in the law and his power to understand it. If bright and industrious, he ought to be able to do as much effective work while a Senior as he did during the two preceding years, and his capacity to learn ought to increase in corresponding ratio in the Postgraduate course. By working earnestly and devotedly during the year he can review the studies of the preceding three years and confidently reach out in other directions to acquire additional knowledge. The nature of his work and the subjects of his study may be briefly indicated:

*Study of the Statutes and System of Pleadings of his State.  
Practice in Taking Depositions.*

*Frequent Participation in Moot Court Trials.*

*Arguments on Motions for New Trials.*

*Preparation of Bills of Exceptions, Briefs, Records and  
Abstracts of Records in Appeals.*

*The Framing of Arguments for a Rehearing.*

*Duties of Masters in Chancery, Referees and Arbitrators.*

*Duties of Assignees and Receivers; also, of Public Officers.*

*Examination of Abstracts of Title and the Making of Deeds,  
Mortgages, Leases, etc., in Conveyancing.*

*A Critical Study of Pleadings, with Reference to Forms and Substance.*

*Jurisdiction of the Federal Courts.*

*The Roman Law.*

*Comparative Constitutional Law and Jurisprudence.*

The exercises of the special class, held on Mondays and Wednesdays, are attended not only by the students of the Postgraduate course, but also by the Seniors. From a practical point of view, these exercises are highly important, and the change in them annually is sufficient to suggest novelty and make them highly interesting and instructive to the students of succeeding years, as where Seniors finish the Postgraduate course. This special work includes the examination of abstracts of title, practical examples in conveyancing, a critical study of the different forms of pleadings and the general business of a successfully conducted law office. While even one year of study is admittedly very helpful, if not actually necessary, yet the benefits and advantages that accrue from attending a second year cannot well be overestimated.

### THE COMMON LAW

is taught primarily at Notre Dame. This is the law generally prevailing throughout the Union—the law that obtains in the States. It addresses itself to almost all the relations of life. In fact, about nineteen out of every twenty cases tried in our courts are decided in accordance with its principles. It is generally uniform in its operation. However, the statutory enactments of State legislatures overcome and displace it, so far as they conflict with its provisions. These enactments differ materially in different States, owing to unlike conditions and local differences. Thus it is that the laws of certain States are so radically unlike the laws of



other States. Of course, there are instances in which statutes are passed to cover acts and conditions not provided for by the common law; but in most instances the existing statutes simply declare, qualify or render inoperative some of its rules.

In view of these facts, thorough instruction is here given in the common law. Neither lawyers nor judges pretend to know the statutes of any other State than of that in which they practice or preside. In fact, a knowledge of the statutes of different States would be more confusing and bewildering than profitable to judges, lawyers and students. Moreover, they are liable to be radically changed from time to time by legislative bodies representing diverse political interests and opinions. In an examination for admission to the bar in this or any other State, no question is put and nothing is said relative to the statutes of sister States. In fact, the States are treated as foreign to one another in law. There are, however, certain fundamental statutory enactments that exist without material diversity in their scope and purpose in almost all the States. Again, other statutes somewhat less important and fundamental in character exist in groups of States. Such statutes as these may be profitably studied in class, in connection with the common law; but it would be worse than useless for a student to attempt to investigate and study the mazes of statutory differences in the several States. Hence, it is suggested as advisable for each Senior or Postgraduate student to procure and have with him for independent study when he comes in September a copy of the revised statutes of his State or of the State in which he intends to practice.

### GRADUATES

of the Law Department have met with exceptional success, it has been noted, in passing examinations for admission to



the bar. Nevertheless, it may be in point to state that it ought hereafter to be comparatively easy for them to meet the requirements of the most rigorous tests in that line, in view of the increase in the number of daily classes and the lengthening of the period of instruction. By way of showing the full accord and co-operation of the Faculty in that regard with the bench and bar of the country, attention may be drawn to the following authoritative expression on the subject, which is embodied in a resolution passed by the American Bar Association in 1897:

*"Resolved, That the American Bar Association approves the lengthening of the course of instruction in law schools to a period of three years, and that it expresses the hope that as soon as practicable a rule may be adopted in each State, which will require candidates for admission to the bar to study law for three years before applying for admission."*

It would certainly be disappointing now to meet a graduate timid at the prospect of an examination. With the right spirit and proper training, he ought to face it cheerfully and unhesitatingly. However, the Supreme Court of Indiana has adopted a rule providing for the admission of graduates of this Department on motion, or without examination. Under this rule they may, being voters, present themselves before the Judges of the Court, exhibit their diplomas, and, on motion of some attorney, followed by the administration to them of the oath of office, be admitted by proper order to the bar, receiving the certificates of licensed attorneys, and having their names inscribed on the "roll of honor" of the Court. This contains the names of those who furnish evidence of having satisfactorily finished the study of law before applying for admission to the bar.

#### THE LAW DEBATING SOCIETY

holds its meetings regularly on Saturday evenings. All students of the Department are members of it. They are

required, each in his turn, to participate in its debates and other exercises. The debates commonly deal with questions germane to the law. However, subjects of history, political economy, and the like, are also in favor. An excellent opportunity is afforded at the meetings of the society to develop skill, power and fluency in public speaking. The graces of the elocutionist and the persuasive power of the orator may here be cultivated and strengthened. All can increase in force and fluency of thought and expression by attending regularly and participating in the exercises of this society. Officers are elected twice yearly by the students themselves. They select also a competent critic to note the mistakes made in pronunciation or otherwise by the speakers at each meeting, and to read a carefully prepared paper correcting the same the following Saturday evening. A Professor presides at the meetings, aids the members by his counsel and suggestions, and decides the questions under discussion on the merits of the arguments.

### THE LAW LIBRARY

adjoins and communicates directly with the Lecture Room, in Sorin Hall. Students have uninterrupted access to it at all reasonable hours. They may frequent it as often as they choose for the purpose of studying cases, preparing for moot court trials, securing authorities for the monthly theses, referring to the cases cited in the text-books and lectures, or reading the standard treatises. Every decision rendered for many years by the State, Territorial and Federal courts may here be found. Consequently, not to repeat other reasons already stated, students are not required to purchase as many law books as they are obliged to have in other places. The books in the Library may be used by the law students in common as freely as can reasonably be wished, and without charge. The same is true relative to

the vast general collection of books in the Lemonnier Library. Law books may be taken from the Library to the Lecture Room for use in moot court trials, but they must afterward be returned. All students have an equal right to use them, being, as it were, tenants in common in that regard; but any disposition to invade the common right, whether through selfishness or thoughtlessness, by attempting to make exclusive use of them, as in placing them under cover in desks or taking them to private rooms, must be vigilantly guarded against and impartially discountenanced. Students have an undoubted right to expect that when they need any particular book they will find it in the Library, and not be compelled to lose valuable time in making inquiry for it elsewhere.

No discrimination is made between law students and students of the regular collegiate courses in the matter of

### EXPENSES.

The fee for tuition, board, lodging, washing, mending, etc., is fixed at \$300 for the scholastic year. This covers all real necessities, and, considering the excellent accommodations at Notre Dame, is believed to be very reasonable. It is said that students elsewhere must pay from \$400 to \$500 a year for like services and accommodations. The cost of books annually may be estimated approximately at \$30. Students have but little occasion or opportunity to spend money or to cultivate expensive habits; for they study, board and lodge at the University, in an atmosphere favorable to earnest work, and quite apart from the associations and temptations incident to city life. Terms of payment and other pertinent information may be found under the general caption "Expenses," on page 26. It may, perhaps, be well to anticipate possible inquiries by stating that no

additional charge is made for attending or becoming students of classes in the collegiate courses.

### DISCIPLINE.

The law students, as well as all others, are expected to be earnest and industrious in the performance of the duties devolving upon them, and to secure this end and the fullest practicable utilization of time the same rules of discipline apply to all the students. These rules require regularity in class attendance, uprightness in conduct and manliness in deportment. Obedience to them tends to strengthen character, establish wholesome habits and nourish in heart and mind the qualities that mark the true gentleman and earnest scholar, the honored citizen and successful lawyer, the independent thinker and firm believer in the illimitable possibilities of industry, perseverance and self-reliance.

## COMMERCIAL COURSE.



This Course can be completed in two years. It includes arithmetic, grammar, letter-writing, geography, United States history, reading, orthography, penmanship, book-keeping, Commercial Law—in other words, all the branches of a complete business education.

When the character and needs of the country are considered, this Course will appear the most practical, and one of the most important that an educational institution can afford.

Those, therefore, who have not the time or means to take a complete college course in the Classics and Sciences, would do well to enroll themselves in the Commercial Course. No plan of study is more injudicious than a haphazard selection of such studies as an inexperienced young man may fancy. The training resulting from a fixed course of studies is of the utmost benefit to the student.

The Commercial Course at Notre Dame has always received the most careful attention from the officers and the Commercial Faculty of the University. Notre Dame claims to give the graduates of this Course a more complete business training than can be obtained in any purely commercial college. Believing that a business education includes something more than a mere knowledge of book-keeping, and that a good education cannot be obtained in a few weeks, the authorities have extended this Course over two years—the shortest time in which studies necessarily used in business life can be mastered. Should a pupil desire during this period to pursue any other studies in which he may be

interested, and for which he has time, he will have liberty to do so.

General History and Linear Drawing are especially recommended to commercial students. They also have an opportunity of attending an elementary course of the Physical and Natural Sciences. Many commercial students find it also to their advantage to keep up the study of German or French, for which there are the amplest facilities. A talented and studious young man may thus in the course of two years find himself in the possession of a most valuable practical education, which will fit him to take his place in the front rank of educated business men.



## JUNIOR YEAR.

### FIRST TERM.

1. **Arithmetic**—Written and Mental—To Decimal Fractions (exclusive). Normal Union Arithmetic, *Brooks*.
2. **Grammar**—To Irregular Verbs (inclusive). Revised English Grammar.
3. **Letter Writing.**
4. **Reading and Orthography.**
5. **Geography**—General Geography of the World; Special Geography of the United States.
6. **United States History**—Through the French and Indian War.
- 7 **Penmanship.**

### SECOND TERM.

1. **Arithmetic**—Decimal Fractions; Denominate Numbers; Practical Measurements. Normal Union Arithmetic, *Brooks*.



2. **Grammar**—From Irregular Verbs to Syntax. Revised English Grammar.
3. **Letter Writing.**
4. **Reading and Orthography.**
5. **Geography**—Special Geography of South America, Europe, Asia, and Africa.
6. **United States History**—From the French and Indian War to the present time.
7. **Penmanship.**



## SENIOR YEAR.

### FIRST TERM.

1. **Arithmetic**—Percentage; Ratio and Proportion; as far as Involution and Evolution. Normal Union Arithmetic, *Brooks*.
2. **Bookkeeping**—Preparatory instruction and definitions; Initiatory Sets by Double Entry; Retailing by Double Entry; special practice in writing Business Paper and Business Forms. New Complete Bookkeeping, *Williams and Rogers*.
3. **Grammar**—Syntax. Revised English Grammar.
4. **Letter Writing.**
5. **Reading and Orthography.**
6. **Penmanship.**

### SECOND TERM.

1. **Arithmetic**—Percentage, Ratio and Proportion (reviewed); Involution and Evolution; Arithmetical and Geometrical Series; Higher Percentage; Mensuration; Arithmetical Analysis. Higher Arithmetic, *Brooks*.



2. **Bookkeeping**—Single Entry; changing Single to Double Entry; Retailing; Wholesaling; Shipping and Commission; Jobbing; Manufacturing; Installment and State Agencies; Joint Stock Companies; Banking; Railroading; Steamboating; Buying and Selling, Remitting, Collecting, Discounting, Accepting, and Paying Bills of Exchange. New Complete Bookkeeping, *Williams and Rogers*.

3. **Composition**—Study of the Theory of English Composition; frequent exercise in Essay and Letter Writing, etc. The Foundations of Rhetoric, *Hill*.

4. **Orthography**.

5. **Commercial Law**—General principles of Contracts; Agency; Partnership; Corporations; Guaranty; Sale of Goods; Negotiable Paper. *Clark*,

6. **Penmanship**.

## PREPARATORY SCHOOL.



MILITARY DRILL—All Preparatory Students of Carroll Hall are required to give two hours a week to Military Drill. Uniform Obligatory.

## FIRST YEAR.

## FIRST TERM.

Latin—Latin Grammar, Etymology, *Bennett*. First Book in Latin, *Tuell and Fowler*. Viri Romæ.

English—Grammar; Etymology; Themes.

History—United States History to the end of the Revolutionary War.

Geography—General Geography of the World. Special Geography of the United States.

Mathematics—Arithmetic, Fractions.

Military Drill—One hour a week throughout the year.

## SECOND TERM.

Latin—Continuation of First Term work.

English—(a) Grammar: Etymology continued. (b) Readings in Class: Longfellow's *Tales of a Wayside Inn*; Stevenson's *Treasure Island*; Defoe's *Robinson Crusoe*. (c) Themes: Subject matter taken from Longfellow's *Tales of a Wayside Inn*; Original Composition. The dictionary required throughout the Preparatory Courses is the *Standard English Dictionary* (Student's Edition).

History—United States History, from the Revolutionary War to the present time.

Geography—Special Political Geography of Europe, Asia and Africa, with outlines of the Physical Geography.

**Mathematics**—Arithmetic, from Fractions to Compound Numbers.



## SECOND YEAR.

### FIRST TERM.

**Latin**—Grammar; Etymology reviewed and general rules of Syntax. *Bennett*. Cæsar; Gallic War, Books I. and II.; Composition—based on the text of Cæsar.

**Greek**—Grammar: Etymology. *Goodwin's*. Exercises, *First Greek Book*, White. (For Classical Students only.)

**English**—(a) Grammar: Syntax, Revised English Grammar. (b) Readings in class: Scott's *The Lady of the Lake*; Longfellow's *Evangeline*; Irving's *Sketch Book*; Newman's *Callista*. Themes: subject matter taken from the books read in class; Original Composition.

**Mathematics**—Arithmetic, from Compound Numbers to Percentage.

**French and German** begun by candidates for Engineering and Scientific Courses. (See entrance requirements of these Courses.)

### SECOND TERM.

**Latin**—Cæsar, Gallic War, Books III. and IV.; Composition, based on Cæsar's text; Grammar, Syntax finished, *Bennett*.

**Greek**—Grammar: Etymology Completed, Exercises, *First Greek Book*, White; Gospel of St. Luke; Selections. *Gate to the Anabasis*, Gleason.

**English**—Work of the First Term continued.

**Mathematics**—Arithmetic, from Percentage and Involution.

**Algebra**—This Course is designed for beginners in Algebra, and comprises a complete study of the primary operations and fundamental principles of the science; thorough drill work in Composition and Factoring; Highest Common Factor and Lowest Common Multiple. When competency is assured in these subjects, the principles of Fractions are considered; also exercises in reduction of Complex Fractions.



## THIRD YEAR.

### FIRST TERM.

**Latin**—Sallust: Catiline; Composition based on text of Sallust; Grammar, review, *Bennett*; Ovid: Metamorphoses.

**Greek**—Grammar, *Goodwin's* Etymology reviewed; Syntax. Xenophon's *Anabasis*. Prose Composition, based on the text of the *Anabasis*.

**English**—Rhetoric, Hills' *Foundations of Rhetoric*; History of American Literature, Painter's *Introduction to American Literature*; Themes, application of Rhetoric; Readings in Class: Tennyson's *Princess*, Professor Cook's text; Milton's *Paradise Lost*, Books I. and II.; *L'Allegro*, *Il Penseroso*, *Lycidas*.

**Algebra**—This Course begins with a study of the Equation and Methods of Transformation and solution of Simple Equations; solution of problems of one and two unknown quantities; Fractional Equations; Simultaneous Equations of the first degree, and solution of problems of two or more

unknown quantities. Then are considered elementary cases of Indeterminate Problems, discussion of Problems and Inequalities; principles of Involution and Evolution, and theory of Exponents; Radical and Imaginary Expressions; Quadratic Surds; Radical Equations and Solution of Problems.

**Geometry, Plane**—The whole subject of Plane Geometry as given in Wentworth's *New Plane and Solid Geometry*. The solution of original problems and theorems constitute the greater part of the Course. The student's proficiency is determined by examinations in which he is required to devise proofs of original and independent propositions.

(a) **Elementary Chemistry**—An Introductory Course of experimental lectures on familiar substances such as water, the air and its constituents, common salt, etc., leading up to discussions of the more important elements and their properties, and the fundamental laws and phenomena of Chemistry. Reference-book, *Remsen*.

(b) **Experimental Chemistry**—A Laboratory Course to accompany Course *a*. A series of exercises to be performed by each student, and having as their main object the cultivation of the student's powers of observation and faculty of inductive reasoning. These exercises comprise a study of the principal metallic elements, including their preparation, properties, and more familiar compounds. The directions for each experiment are made as brief as possible, the observation of facts and the drawing of correct conclusions therefrom being left, so far as the nature of the experiment will permit, to the pupil.

**Physics, Elementary**—A Course of recitations and lectures, including Mechanical, Heat, Sound, Light, Electricity and Magnetism. The work is fully illustrated by experiments.

**Physiology**—Elementary.

**Botany**—Elementary. (For Civil Engineering Students.)

**History**—(a) United States,

(b) General outlines. See page 94.

## SECOND TERM.

**Latin**—Cicero, Catilinaria; Composition based on Cicero's text; Virgil, Eclogues or Georgics; Prosody; Scansion of Hexameter Verse.

**Greek**—Grammar: General Rules of Syntax; Xenophon, Anabasis entire; Composition, based on the text of the Anabasis.

**English**—Continuation of the First Term work.

**Algebra**—This Course begins with a review of Radicals. Then follows a study of Pure and Affected Quadratic Equations and Simultaneous Quadratics; solution of problems involving Quadratics; Arithmetical and Geometrical Progressions; discussions of Simple Indeterminate Equations and exercises. Solution of problems is rigidly enforced and numerous original exercises are added to supplement the work.

**Geometry, Solid**—Theorems pertaining to Planes and Polyhedral Angles, Polyhedrons, the Cylinder, Cone and Sphere. The study of Spherical Angles, Spherical Surfaces, the Measure of Spherical Surfaces, receive all the attention necessary to familiarize the student with this important and practical part of Geometry. Solution of original exercises, proofs of independent propositions and examinations.

**History**—See First Term.

**Zoology**—Elementary. (For Civil Engineering Students.)

Minim Department.



## MINIM DEPARTMENT.



For the care and training of boys under the age of thirteen years, there has been established a department to which the most scrupulous attention has always been paid by the college authorities: it is known as the Minim Department.

Thorough and comprehensive instruction in all the elementary branches of an English education is here imparted, together with a rudimentary knowledge of Latin, French and German. Vocal Music and Drawing Course no extra charge. The pupils of this department are taught by Sisters of the Holy Cross.

### DISCIPLINE.

The following is the order of the day: Rising at 6:40 a. m., toilet, etc.; seven, breakfast, after which there is a short time given for exercises on the campus; half-past seven, study; half-past nine, luncheon; ten, study; a quarter to twelve, toilet; twelve, dinner, followed by recreation; half-past one, study; half-past three, recreation and luncheon; half-past six, supper and recreation; half-past eight, retiring. From this it may be seen that while the Minims devote less than six hours a day to study, they are never more than two hours in succession in the class-room. The recreation and exercise in the fresh air between each two hours of study, unbend the mind and prepare the boys to return to their classes refreshed and ready for work.

The Minims are always under supervision, during the hours of recreation as well as in the class-room and study-hall. The presence, however, of the Prefect is far from being a restraint on the amusement of the boys; for while it is the duty of the Prefects to insist that their young charges shall always keep within the limits of the strictest propriety, they, at the same time, take part in all sports, organize games, and do everything in their power to foster the love of exercises. The play-ground is a broad, level, five-acre field, well supplied with turning poles, swings, ladders, rings, parallel-bars, and all other necessary gymnastic apparatus. That the boys make good use of them can be seen from their healthy, happy appearance, which invariably attracts the notice of visitors. Connected with the play-ground is a brick play-hall, 160 feet long and heated by steam. In this hall the boys play in rainy or cold weather.

The Sisters preside at the toilet; they clean and mend the clothing; see to all the needs and to the comfort and convenience of the Minims. Baths are taken every few days. Underclothing is changed regularly. Great care is taken that the boys be neatly dressed, and that the clothing be suitable for the season.

### SOCIETIES.

There are two societies in the Minim department; that of the Guardian Angels of the Sanctuary, which has for its object to supply servers for the Church offices; and the Sorin Association, which has been established with a view to give the pupils a start, as early as possible, in elocution. The society is presided over by one of the professors, who find it a pleasant duty to draw out the talent of these interesting young orators. Meetings are held once a week, after school hours. These meetings are a source of pleasure as well as

of profit. The members prepare original compositions, deliver declamations, are trained to debate, etc. Only the best behaved and more advanced in studies are admitted to membership. To encourage this young Literary Society, a Gold Medal is annually awarded at Commencement for Elocution to the most deserving member.

### GENERAL REMARKS.

The discipline to which the Minims are subjected is much milder than that which is suited to students more advanced in age. Recourse is scarcely ever had to punishment. Those in charge endeavor to govern by kindness and gentleness, and by appealing to the boys' sense of honor. The names of all whose conduct and application to studies are satisfactory appear under the heads of Roll of Honor and Class Honors. To find his name mentioned in these rolls, is found to be as great a reward for the deserving pupil, as its non-appearance is a punishment for the undeserving.

Then, too, there is a Gold Medal awarded at the end of two full years to those whose deportment has been unexceptionable during that period. As this fact is made known to the Minim immediately after his entrance, he generally endeavors to shape his conduct with a view to receiving an "Honor." The greatest care is taken to form their young hearts to habits of virtue, and to inculcate the practice of refined manners. Every effort is made to foster respect and affection for parents, to whom they are expected to write at least once a week.

Not the least of the advantages enjoyed by the Minims is their complete separation from the larger students. A commodious building, known as St. Edward's Hall, affording ample accommodations for over one hundred

pupils, is devoted to their use. It is four stories in height, one hundred and fifty feet long, and forty-five feet wide; heated by steam, supplied throughout with the Edison incandescent electric light, and provided with hot and cold water. The ceilings in the Study-Hall, Class-Rooms and sleeping apartment are fifteen feet high. The windows are large and numerous, affording abundant light and ventilation. The Study-Hall commands a charming view from each of its eleven large windows. It is tastefully decorated with statuary, pictures, plants, etc. Beside the pleasure the Minims derive from studying in this bright, cheerful hall, their tastes are cultured by coming in contact with objects so refining. Fronting the building is a handsome park, which, with its fountains, rare trees and flowers, adds not a little to the beauty of St. Edward's Hall, as well as to the happiness of its inmates.

These remarks, which have been made to satisfy parents and others who frequently write for more detailed information, will show that, while the Minims have every possible advantage to aid them in acquiring a foundation for future study, they have a home, where they enjoy the same ease and freedom that they would enjoy under the care of their mothers.

## EXPENSES.



Matriculation Fee (payable on first entrance),	. \$ 10.00
Board, Tuition, etc., per session of ten months,	. . 250.00

The above rates are payable in advance as follows:

On entrance in September,	. \$150.00
January 15th, . . . . .	100.00

### EXTRAS OPTIONAL.

The charge per session of ten months for Piano lessons, and the use of instrument in this department is \$35.00; for Violin, Guitar or Mandolin, \$25.00.

Pupils who remain during the two Summer Vacation Months are charged \$40.00.

Accounts are subject to sight draft, without notice, if not paid within ten days after they have been rendered.

Each pupil, on entering this department, should have six shirts, four pairs of drawers, three night shirts, twelve pocket handkerchiefs, six pairs of stockings, six towels, two hats or caps, two pairs of shoes, two suits of clothes for winter, two suits for summer, one overcoat, toilet articles, etc. This direction concerning clothing is a suggestion, not a regulation.

## CATALOGUE OF STUDENTS.

From September 1899, to June 1st, 1900.



In this list are not included the names of those students who were dismissed or withdrawn at the request of the College authorities during the scholastic year.

Arizaga, Vicente.....	Cuba .....
Acebal, Amado A.....	Cuba .....
Antoine, Laurence M.....	Illinois .....
Abercombie, John J.....	Illinois .....
Abrahams, Louis L.....	Illinois .....
Askanas, Jacob S.....	Missouri.....
Allison, Cornelius.....	Indiana .....
Arana, Victor M.....	Peru, So. America
Acuna, Antonio.....	Mexico .....
Ahern, Eugene T.....	Illinois .....
Althoff, Arnold S.....	Ohio.....
Atkinson, John W.....	Illinois .....
Acosta, Jose J.....	Puerto Rico.....
Bligh, Michael F.....	Indiana .....
Brown, Robert P.....	Iowa.....
Boor, John L.....	Iowa.....
Brogan, Anthony J.....	Pennsylvania....
Bump, Alex. P.....	Illinois .....
Butler, Philip V.....	Nova Scotia.....
Blaes, Andrew J.....	Illinois .....
Brown, Henry E.....	South Dakota....
Buckler, Claude M.....	Texas.....
Blanchard, Charles.....	New Mexico.....
Baackes, Godfrey D.....	Ohio.....
Bescher, Robert H.....	Ohio.....
Brehmer, Charles A.....	Indiana.....
Bortz, Walter H.....	Indiana.....

Bauman, E. Walter	Ohio
Birk, Walter O	Illinois
Butler, Thomas J	Ohio
Blanchfield, Walter J	Illinois
Brown, August J	Ohio
Bergan, Francis J	Indiana
Bough, Edwin F	Indiana
Basave, Augustine	Mexico
Brand, Harry P	Indiana
Bernero, John A	Illinois
Bande, Frank H	Illinois
Bosworth, Alvah C	Illinois
Bassi, Anthony M	Illinois
Bassi, John C	Illinois
Bemis, Vere B	Illinois
Blakeslee, Rollin T	Ohio
Butler, William J	Ohio
Brooks, Don. M	Illinois
Burger, Anthony J	New York
Benoist, Louis M	Missouri
Byrne, John M	Illinois
Barry, Harry P	Iowa
Baldwin, William E	Illinois
Baer, Fred L	Pennsylvania
Baab, Charles J	Pennsylvania
Bohner, George H	Illinois
Burkitt, George W	Texas
Beltran, Miguel L	Mexico
Brent, Francis C	Florida
Burg, Leo J	Iowa
Bandy, Claude W	Illinois
Best, Louis E	Montana
Becker, Alphonse M	Minnesota
Barrett, Glenn W	Michigan
Bradley, J. Francis	Illinois
Burke, Jeffrey A	Illinois
Bouza, John J	South Dakota
Blume, Austin D	Michigan
Burke, Joseph H	Wisconsin
Burke, Eugene P	Illinois
Burke, Thomas E	Illinois



Barry, Francis J.....	Indiana.....
Brand, William L.....	Indiana.....
Benson, Charles A.....	Rhode Island ....
Corbidge, Albert.....	Illinois .....
Cullinan, Charles J.....	Pennsylvania ....
Crimmons, Timothy.....	Illinois .....
Connor, Michael J.....	Pennsylvania.....
Coleman, Charles D.....	Indiana.....
Cooney, John J.....	Illinois .....
Crumley, Harry V.....	Ohio.....
Connor, Fred, A.....	Pennsylvania ....
Crowley, Michael J.....	Illinois .....
Corbidge, James H.....	Illinois .....
Corbidge, Walter J.....	Illinois .....
Crosas, Philip.....	Puerto Rico.....
Cressey, Clement G.....	Indiana.....
Clarke, Robert E.....	Illinois .....
Commer, Matthew M.....	Indiana.....
Casparis, Kenneth E.....	Ohio.....
Coquillard, Joseph A.....	Indiana.....
Cunnea, John J.....	Illinois .....
Carey, Martin J.....	Kansas .....
Corcuera, Javier.....	Mexico .....
Canedo, Ignacio.....	Mexico .....
Canedo, Enrique O.....	Mexico .....
Coll, Victor D.....	Puerto Rico.....
Chittenden, Irving B.....	Illinois .....
Connolly, Cassius H.....	Illinois .....
Casey, Grover F.....	Illinois .....
Clapp, William M.....	Indiana.....
Carey, Howard C.....	Illinois .....
Carey, Charles A.....	Illinois .....
Carey, Clarence C.....	Illinois .....
Carroll, James M.....	Illinois .....
Conover, H. St. Clair.....	Illinois .....
Canizares, Gerard F.....	Cuba .....
Canizares, Manuel.....	Cuba .....
Costello, John.....	Illinois .....
Clancy, Harry C.....	Indiana.....
Crane, Laurence W.....	Michigan .....

Connors, James.....	Illinois .....
Clayton, Paul W.....	Illinois .....
Corcoran, Patrick J.....	Illinois .....
Cornell, Francis B.....	New York .....
Culkin, John F.....	Illinois .....
Coquillard, Alexis P.....	Indiana.....
Collins, Daniel E.....	Massachusetts....
Cypher, George A.....	Pennsylvania....
Campbell, Eugene.....	Missouri.....
Campbell, William M.....	Massachusetts....
Cortes, Charles E.....	Mexico .....
Coll, Cayetano.....	Puerto Rico.....
Clyne, Joseph A.....	Kansas .....
Cooney, Maurice J.....	Illinois .....
Cooney, Daniel E.....	Illinois .....
Cleary, Leo.....	Nebraska .....
Curry, John P.....	Connecticut.....
Coffey, James.....	Iowa .....
Crowley, Timothy J.....	Indiana .....
Curran, William C.....	Michigan .....
Cameron, William.....	Michigan .....
Cullinan, Joseph J.....	Indiana.....
Claffey, Edward J.....	Indiana.....
Corley, John L.....	Missouri.....
Carlton, Joseph R.....	New Jersey .....
Crotty, James T.....	Illinois .....
Dorian, Francis P.....	Indiana.....
Donovan, Francis C.....	Illinois .....
Daay, Francis C.....	Massachusetts....
Davis, Edwin H.....	Idaho.....
Drewes, Henry A .....	Illinois .....
Drachbar, John H.....	Pennsylvania ....
Daly, Charles E.....	New Jersey .....
Duncan, Ernest C.....	Indiana.....
Davies, Boaz C.....	Arkansas .....
Dunne, James L.....	Montana .....
Durand, Eugene.....	Illinois .....
Dolan, Leroy B.....	Illinois .....
Dougherty, Philip F. H.....	District Columbia

Duff, Ralph A.....	Nebraska .....
Dierson, Arthur A.....	Illinois .....
Delone, Louis S.....	Pennsylvania ....
Davis, Grover C.....	Indiana.....
Day, Francis M.....	Illinois .....
Downer, Henry O.....	Georgia.....
Donahoe, Henry.....	Illinois .....
Dee, Samuel R.....	Illinois .....
Dee, William.....	Illinois .....
Deur, Lorenzo J.....	Iowa .....
DeRocher, Arthur H.....	Illinois .....
Dorley, Anthony F.....	Pennsylvania ....
Dwyer, Vincent D.....	Indiana .....
Duperier, Alfred J.....	Louisiana.....
Dalton, William D.....	Indiana .....
Dinnen, William F.....	Indiana .....
Dwyer, Thomas F.....	Rhode Island....
Donahoe, Matthew J.....	Illinois .....
Dominguez, Rafael.....	Mexico.....
Darst, Eddens J.....	Illinois .....
Drueke, Harry P.....	Minnesota .....
Devine, Mark A.....	Illinois .....
Duggan, James B.....	Iowa.....
DuBrul, Davilla S.....	Ohio .....
Dempsey, Neal.....	Michigan .....
Douglas, Laurence A.....	Louisiana .....
Dukette, Francis F.....	Michigan .....
Dwan, Patrick J.....	Indiana.....
DeWulf, Emil J.....	Indiana .....
Davis, Ernest A.....	Indiana .....
Dempsey, Joseph A.....	Illinois .....
Dowling, Andrew J. . . . .	Indiana .....
Devereaux, Arthur J.....	Illinois .....
Draper, William A.....	Illinois .....
Dwyer, Francis J.....	Indiana.....
Elitch, Charles J.....	California.....
Eder, Edward J.....	Indiana.....
Emerson, Ritchie J.....	Texas.....
Ervin, John B.....	Indiana.....

Eggeman, John W.....	Indiana .....
Ellwanger, Ralph J.....	Iowa .....
Euart, Charles L.....	Rhode Island .....
Egan, William J.....	Canada .....
Fleming, Henry J.....	Michigan .....
Fleming, Charles F.....	Michigan .....
Falomir, Ponciano.....	Mexico .....
Finlay, George C.....	Illinois .....
Farragher, John.....	Ohio .....
Fetherstone, Louis M.....	Iowa .....
Fernandez, Bernardo I.....	Cuba .....
Fleming, Shirley J.....	Ohio.....
Flynn, Arthur A.....	Mexico .....
Flynn, Miles E.....	Mexico .....
Fleischer, Oscar F.....	Illinois .....
Frechette, John B.....	Michigan .....
Farabaugh, Gallitzen.....	Pennsylvania....
Ferstl, William G.....	Indiana .....
Fogarty, John H.....	Indiana .....
Freymann, Charles M.....	Iowa.....
Friedman, Arthur S.....	Illinois .....
Fisk, Donald D.....	Michigan .....
Frain, Francis J.....	Indiana .....
Flynn, Milton.....	Mexico .....
Fox, Hubert M.....	Wisconsin .....
Fogarty, Fred J.....	Indiana .....
Fuchs, Albert.....	Illinois .....
Fuchs, Carl.....	Illinois .....
Fergus, C. Delos.....	Illinois .....
Fink, Albert H.....	Illinois .....
Fox, William E.....	Wisconsin .....
Forbing, John W.....	Ohio.....
Fortin, Albert C.....	Illinois .....
Fahey, Joseph A.....	Georgia .....
Falomir, Jose M.....	Mexico .....
Fogarty, James P.....	Pennsylvania....
Follen, Peter E.....	Indiana.....
Fox, Robert L.....	Indiana.....
Funk, Robert S.....	Wisconsin .....

Fink, Henry S.....	Maryland.....
Furry, William D.....	Indiana.....
Fredell, George B.....	Idaho.....
Fredell, Edwin J.....	Idaho.....
Farley, John F.....	New Jersey.....
Foertsch, George F.....	Ohio.....
Finner, Charles.....	Canada.....
Flynn, James B.....	Michigan.....
Finnegan, Thomas J.....	Ohio.....
Flynn, Paul I.....	Missouri.....
Furlong, Nicholas R.....	Wisconsin.....
Gil Enrique G.....	Cuba.....
Gallastequi, Frederico L.....	Mexico.....
Gallagher, Peter.....	Texas.....
Gaston, Francisco G.....	Cuba.....
Gali, Rafael.....	Cuba.....
Gormley, George E.....	Wisconsin.....
Gilmartin, Francis J.....	Indiana.....
Gulliver, Edward C.....	Maine.....
Griffin, Francis J.....	Montana.....
Glynn, Ralph L.....	Wisconsin.....
Garza, Carlos.....	Texas.....
Glasheen, William P.....	Illinois.....
Glaspie, James W.....	Minnesota.....
Geraghty, James J.....	Minnesota.....
Geraghty, Hubert A.....	Minnesota.....
Green, Erie J.....	Michigan.....
Garcia, Maximo.....	Mexico.....
Gibson, John H.....	Texas.....
Gibson, William K.....	Texas.....
Gasman, William F.....	Illinois.....
Goodhue, Wells E.....	Illinois.....
Gosling, Arthur.....	Illinois.....
Gil, Evilio G.....	Cuba.....
Garrigan, John G.....	Ohio.....
Gallart, Jose P.....	Cuba.....
Gallagher, Edward P.....	Pennsylvania.....
Gilbert, Edward J.....	Illinois.....
Garza, Rodolfa M.....	Mexico.....
Garza, Marcelino L.....	Mexico.....

Guilfoyle, William A.....	Illinois .....
Gibson, Norwood R.....	Illinois .....
Groogan, Dominic J.....	Pennsylvania.....
Gaffney, George A.....	Connecticut .....
Glaspie, John J.....	Minnesota .....
Guerra, Enrique L.....	Mexico .....
Gomez, Manuel M.....	Mexico .....
Guinchard, Alejandro.....	Mexico .....
Gallagher, Hugh S.....	Indiana .....
Gorski, Marcellinus K.....	Illinois .....
Galagan, James S.....	New York.....
Gruza, Stanislaus A.....	Indiana.....
Guiff, Paul J.....	Indiana.....
Hoffman, Leo M.....	Michigan.....
Heaphy, Thomas R.....	New Jersey .....
Hanley, Francis X.....	Indiana .....
Harrington, Thomas M.....	Iowa .....
Harrington, James B.....	Utah .....
Hierholzer, Aloysius M.....	Ohio.....
Hennebry, John F.....	Illinois .....
Hoban, Thomas J.....	Indiana.....
Hoban, Maurice J.....	Indiana.....
Hoff, Albert S.....	Wisconsin .....
Hughes, Francis B.....	Nebraska .....
Hartnett, Daniel J.....	Illinois .....
Hubbell, Lorenzo.....	Arizona.....
Hoffman, John B.....	Illinois .....
Hoffman, Francis F.....	Illinois .....
Huleatt, Hugh W. P.....	Illinois .....
Hogan, Nicholas J.....	Illinois .....
Helwig, Edward C.....	Indiana.....
Hoban, Martin C.....	Indiana.....
Harmon, Rawson B.....	Illinois .....
Hemmerich, Harry J.....	Illinois .....
Hart, Laurence A.....	Indiana .....
Houser, Benjamin H.....	Indiana .....
Hanley, Robert E.....	Idaho.....
Hay, Edward F.....	Mexico .....
Hernandez, Jose.....	Puerto Rico .....
Hanhouser, George J.....	Pennsylvania.....

Hayes, John P.....	New York.....
Highstone, Sedgwick.....	Michigan.....
Hare, James S. M.....	Illinois.....
Houser, Bertrand A.....	Indiana.....
Haefner, Joseph.....	Pennsylvania.....
Higgins, William P.....	Massachusetts.....
Herbert, Martin B.....	Illinois.....
Hayes, Arthur T.....	Ohio.....
Hayes, John E.....	Ohio.....
Hegarty, Charles K.....	Indiana.....
Hennessey, John J.....	Indiana.....
Heiser, Leo J.....	Indiana.....
Henehan, Vincent P.....	Rhode Island.....
Horwarth, George F.....	Indiana.....
Hagerty, Cornelius J.....	Indiana.....
Hanyz, Martin.....	Indiana.....
Hart, James W.....	Indiana.....
Henry, Lester J.....	Ohio.....
Hughes, Charles E.....	New York.....
Irazoqui, Francisco P.....	Mexico.....
Ill, Alphonse P.....	Ohio.....
Irving, Thomas P.....	Wisconsin.....
Jennings, Asher M.....	Indiana.....
Johnson, Milford H.....	Yukon Ter., Can.....
Jones, Vitus G.....	Michigan.....
Johnson, Reuben A.....	Minnesota.....
Johnson, Ernest E.....	Minnesota.....
Jenkins, Joseph M.....	Kentucky.....
Kerby, Harley E.....	Indiana.....
Kuntz, John J.....	Ohio.....
Kidney, Charles F.....	Pennsylvania.....
Kidder, Francis W.....	Illinois.....
Kahler, Charles P.....	Maryland.....
Kays, Charles J.....	Illinois.....
Keating, Edward J.....	Illinois.....
Krupka, James J.....	Illinois.....
Kuppler, George W.....	Indiana.....



Kelly, George H.....	Wisconsin .....
Kelly, James W.....	Indiana .....
Knell, John G.....	Illinois .....
Kennedy, Clarence J.....	Illinois .....
Kasper, Robert A.....	Illinois .....
Kennedy, John E.....	Illinois .....
Kolck, Richard.....	Iowa .....
Krug, Albert L.....	Ohio.....
Kelly, Leo J.....	Illinois .....
Kellner, Francis A.....	Kentucky.....
Kelly, A. Dunlevy.....	Ohio.....
Kelley, Charles H.....	Minnesota .....
Kelly, Edward A.....	Georgia.....
Kidwell, Franklin B.....	Ohio .....
Kasper, William H.....	Illinois .....
Keeley, Burt.....	Illinois .....
Kachur, Albert.....	Indiana .....
Krost, Robert A.....	Indiana .....
Kinney, Joseph C.....	Wyoming .....
Kasper, Fred J.....	Illinois .....
Kammer, Louis C. J.....	Ohio.....
Kindler, Hugo V.....	Michigan .....
Krembs, Anton C.....	Wisconsin .....
Kiely, Charles J.....	New York.....
Kelleher, Joseph P.....	Massachusetts. . .
Kearin, Cornelius J.....	Illinois .....
Kelly, Louis M.....	Indiana .....
Kolupa, Ladislaus A.....	Indiana .....
Kelly, John Leo.....	Indiana .....
Kelly, John R.....	Indiana .....
Leo, Carl.....	Iowa .....
Leonard, Charles B.....	West Virginia....
Laden, James E.....	New York.....
Locke, J. Clyde.....	Indiana .....
Lindemann, Philip.....	Mississippi. ....
Land, William B.....	Illinois .....
Lomelin, Ignacio F.....	Mexico .....
Leach, George W.....	Indiana .....
Lynch, John J.....	Illinois .....

Loredó, Serafin.....	Cuba .....
Lopez, Rafael A.....	Puerto Rico.....
Liddy, Lewis W.....	Illinois .....
Lantry, Joseph T.....	Illinois .....
Landgraf, Henry H.....	Illinois .....
Lahey, Sylvester B.....	Indiana .....
Luken, Laurence H.....	Indiana .....
Lee, Richard E.....	Indiana.....
Lawton, Jasper H.....	Texas.....
Lilly, John M.....	Illinois .....
Lennon, Peter B.....	Michigan .....
Lins, George J.....	Illinois .....
Lavell, John C.....	Iowa .....
Lannert, Ramond N.....	Indiana .....
Langley, Fred E.....	Illinois .....
Lopez, Martin.....	Puerto Rico.....
Lopez, Ulises.....	Puerto Rico.....
Lamprey, John L.....	Minnesota.....
Lavin, Walter H.....	Rhode Island.....
Long, Edward T.....	Ohio .....
Lynch, Robert E.....	Illinois .....
Lavelle, John J.....	Indiana .....
Long, Matthew D.....	New York.....
Lyons, Leo E.....	Ohio.....
Murphy, Edgar J.....	Indiana .....
Mulcrone, Charles J.....	Michigan.....
Maurin, Francis J.....	Minnesota .....
Murphy, James K.....	Iowa .....
Miksak, Emil J.....	Illinois .....
Miller, William T.....	Illinois .....
Madden, George S.....	Illinois .....
Malone, William H.....	Michigan .....
Murphy, John L.....	Indiana .....
Manier, William I.....	Ohio .....
Meyer, Fred. W.....	Illinois .....
Maloney, John J.....	Kentucky.....
Mahoney, Daniel J.....	Illinois .....
Mulcare, Thomas J.....	Missouri .....
Moran, E. Etheridge.....	Michigan .....

Mooney, Stanton G.....	Minnesota .....
Medley, Benjamin F.....	Kentucky.....
Macdonald, Edward A.....	Minnesota .....
Muno, Henry.....	Illinois .....
Madero, Benjamin.....	Mexico .....
Madero, Daniel.....	Mexico .....
Mueller, Walter P.....	Montana .....
Madero, Gabriel J.....	Mexico.....
Madero, Julio E.....	Mexico .....
Moreno, Manuel.....	Mexico .....
Morgan, Fred.....	Indiana .....
Mulligan, Bernard J.....	Colorado.....
Miles, Charles E.....	Illinois .....
Munson, Harold A.....	Michigan.....
Mooney, Edward L.....	Minnesota .....
Madero, Raul H.....	Mexico .....
Mix, Kenyon W.....	Indiana .....
Munson, Porter W.....	Missouri .....
Murphy, Eugene F.....	Minnesota .....
Murphy, James F.....	Illinois .....
Monahan, Wm. P.....	Illinois .....
Mullen, John I.....	Minnesota .....
Merz, Arthur W.....	Pennsylvania .....
Meyers, Dorrance D.....	Iowa .....
Medley, Thomas A.....	Kentucky.....
Martinez, Alberto.....	Mexico .....
Maher, Wm. H. N.....	Illinois .....
Murray, Thomas J.....	New York.....
Moxley, George T.....	Illinois .....
Morgan, James E.....	Iowa.....
Monagas, Ulises.....	Puerto Rico.....
Moore, Wm. A.....	Illinois .....
Mead, Wm. G.....	West Virginia....
Murphy, Joseph E.....	Wisconsin .....
Mills, Nathan K.....	Indiana.....
Manatt, Guy S.....	Iowa .....
Marr, George J.....	Colorado.....
Murphy, Timothy R.....	Michigan.....
Moroney, Joseph J.....	Ohio.....
Murphy, John F.....	Illinois .....
Madden, Thomas E.....	Indiana .....

Maloney, John A.....	Illinois .....
Mannix, James J.....	New Jersey .....
McAuley, John A.....	Ohio.....
McAuley, Milo J.....	Ohio.....
McFadden, George J.....	Illinois .....
McConachie, John A.....	Pennsylvania ....
McNulty, Michael P.....	New Jersey.....
McGee, George A.....	Illinois .....
McGlew, Henry J.....	Massachusetts ..
McGrath, Patrick.....	Missouri.....
McAdams, Harry C.....	Indiana .. .....
McFadden, Clarence J.....	Utah .....
McDonough, Patrick J.....	New York .....
McInerney, William A.....	Indiana .. .....
McAlpine, Roy M.....	Illinois .....
McDermott, Edward W.....	Illinois .....
McCarthy, Thomas E.....	Illinois .....
McCracken, Charles S.....	Ohio.....
McGarrell, John J.....	Dis't of Columbia
McFarland, Alex. W.....	Ohio .....
McCarthy, J. Gerald.....	Illinois .....
McCambridge, George J.....	Illinois .....
McNeil, Wm. R.....	Wisconsin .....
McWeeney, John.....	Indiana .. .....
McDowd, Edwin J.....	Illinois .....
McNamee, Charles.....	Illinois .....
McFarland, Clarence J.....	Ohio .....
McBride Paul H.....	Ohio.....
McBride, Louis W.....	Ohio .....
McBride, John L.....	Ohio.....
McBride, Wm. M.....	Ohio.....
McLean, Wm. ....	New Jersey .....
McNamee, Wm. P.....	Illinois .....
McMahon, John T.....	Illinois .....
McMahon, Wm. J.....	Illinois .....
McNamee, George J.....	Illinois .....
McIver, Francis F.....	Illinois .....
McIver, James S.....	Illinois .....
McGinnis, James H.....	Massachusetts ..
McPhee, Raymond J.....	Colorado.....

McDonald, Angus D.....	Texas.....
McDougall, Natt.....	Wisconsin.....
McKeever, Francis H.....	Iowa.....
McCarthy, Eugene E.....	Illinois.....
McCarthy, Justin J.....	Illinois.....
McDonnell, Alex. A.....	Wisconsin.....
McCormick, James P.....	Utah.....
McElroy, James W.....	Illinois.....
McNerney, James H.....	Kansas.....
McWeeney, James.....	Indiana.....
McKeon, Fred. T.....	Connecticut.....
McCarthy, Jeremiah J.....	New York.....
McGovern John T.....	Wisconsin.....
McQueen, Fred. C.....	Michigan.....
McCauley, Hugh B.....	Rhode Island.....
McMahon, Thomas J.....	Illinois.....
McElligott, Peter P.....	New York.....
McNamara, Peter J.....	Massachusetts.....
McGinn, John C.....	Rhode Island.....
Norton Wm. T.....	Kentucky.....
Naughton, Thomas M.....	Illinois.....
Nies, Charles H.....	Indiana.....
Narcelle, Edward P.....	South Dakota.....
Niehofs, Otto F.....	Ohio.....
Nissler, Charles C.....	Montana.....
Nash, Louis C.....	Nebraska.....
Noonan, Thomas E.....	Illinois.....
Newman, John W.....	Iowa.....
Neeson, John J.....	Pennsylvania.....
Nolan, Wm. E.....	Illinois.....
O'Connor, Eugene.....	Iowa.....
O'Hara, John P.....	Minnesota.....
O'Malley, Linus C.....	Iowa.....
O'Malley, Dominic K.....	Wisconsin.....
O'Shea, Daniel E.....	Michigan.....
O'Reilly, Joseph P.....	Ohio.....
O'Hanlon, Henry J.....	Montana.....
O'Connor, John J.....	Indiana.....
O'Reilly, Luke.....	Missouri.....

Owens, John A.....	Iowa .....
O'Connor, Wm. J.....	Kentucky.....
O'Brien, Francis B.....	Indiana .....
O'Neill, Philip B.....	Indiana .....
O'Shaughnessy, Martin.....	Missouri .....
O'Malley, Raymond G.....	Iowa .....
O'Shaughnessy, Francis.....	Missouri .....
O'Brien, Wm. W.....	Illinois .....
O'Neal, Harold J.....	Minnesota .....
Oswald, Mathias J.....	Indiana.....
O'Connell, John J.....	New York.....
O'Brien, Wm. C.....	Ohio.....
O'Donnell, Charles L.....	Indiana .....
O'Donnell, Walter.....	Michigan.....
O'Neill, James J.....	Missouri.....
O'Reilley, John A.....	Ohio .....
O'Connor, Daniel J.....	Illinois .....
O'Connor, George I.....	Oklahoma Ter...
O'Shea, John P.....	Indiana .....
Pancratz, James.....	Minnesota .....
Paulin, Henry E.....	Indiana .. .....
Pancratz, Alex. J.....	Minnesota .....
Plunkard, Homer A.....	Indiana.....
Petritz, Francis J. M.....	Illinois .....
Philip Francis J.....	Illinois .....
Price, Robert J .....	Wyoming.....
Putnam, John L.....	Kentucky.....
Phillips, E. Wayne.....	Michigan .....
Pollak, Wm. T.....	Illinois .....
Phillip, George P.....	Illinois .....
Palmer, Santiago B.....	Puerto Rico.....
Pick, C. Edwin .....	Wisconsin .....
Pick, John B.....	Wisconsin .....
Pastor, Justo A.....	Peru, So. America
Parker, Thomas W.....	Kansas .....
Powers, John F.....	Illinois .....
Palacios, Manuel.....	Ecuador, So. Am.
Pienta, Stanislaus C.....	Michigan .....
Quinlan, John M.....	Illinois .....
Quinlan, James.....	Illinois .....

Rose, Laurence B .....	Illinois .....
Richon, Alfred J. ....	Illinois .....
Riley, Wm. L. ....	Illinois .....
Rangel, Jesus L. ....	Mexico .....
Rincon, Francisco. ....	Mexico .....
Riley, Robert S. ....	Ohio. ....
Revilla, Roberto. ....	Mexico .....
Romero, Vincent F. ....	New Mexico. ....
Reichardt, Herman C. ....	Illinois .....
Roberts, Wm. W. ....	Indiana. ....
Rhodes, John A. ....	Indiana. ....
Rush, Charles E. ....	Indiana. ....
Ryan, Wm. J. ....	Michigan. ....
Rothwell, Henry P. ....	Wyoming. ....
Reihing, Wm. H. ....	Pennsylvania .....
Ramirez, Juan E. ....	Cuba .....
Riley, John E. ....	Illinois .....
Rabb, Donald S. ....	Illinois .....
Ratchford, Hugh C. ....	Illinois .....
Randle, Drummond F. ....	Illinois .....
Rothwell, Paul A. ....	Wyoming .....
Rousseau, Edward L. ....	Nebraska .....
Robbins, Wilson. ....	Illinois .....
Robinson, Leo C. ....	Illinois .....
Reuss, Charles J. ....	Indiana. ....
Rumley, Edward A. ....	Indiana. ....
Regan, Paul J. ....	California. ....
Rowley, Wm. A. ....	Illinois .....
Rayneri, Virgilio N. ....	Cuba .....
Rayneri, Eugenio P. A. ....	Cuba. ....
Rodriguez, Enrique. ....	Mexico .....
Rodriguez, Gilberto. ....	Mexico .....
Rodriguez, Julio. ....	Mexico .....
Rul, Miguel. ....	Mexico .....
Ross, Albert J. ....	Minnesota .....
Ryan Martin G. ....	Illinois .....
Ragan, Paul J. ....	Ohio. ....
Ritter, Paul. ....	Indiana. ....
Ryan, John M. ....	Illinois .....
Rigney, John A. ....	Indiana. ....



Robert, Hubert R.....	Indiana.....
Rebillot, Paul F.....	Ohio.....
Schaefer, Francis J.....	New York.....
Sneyd, Joseph E.....	Illinois.....
Stewart, Charles L. ....	Idaho.....
Steele, Franklin A.....	Oklahoma Ter...
Smith, Stephen H.....	Illinois.....
Svendson, John J.....	Ohio.....
Sherman, Henry A.....	Illinois.....
Shea, John P.....	Utah.....
Stuckey, Carl M.....	Indiana .. ..
Smith, Jay B.....	Ohio.....
Senrich, George A.....	Indiana.....
Schneider, John S.....	Wisconsin.....
Szybowicz, Leonard.....	Indiana.....
Smoger, Francis A.....	Indiana.....
Stephen, Anton C.....	Illinois.....
Sharp, Wm. S.....	Indiana.....
Sharp, Henry E.....	Indiana .. ..
Shea, Allan H.....	Wisconsin.....
Serafin, Fernando.....	Cuba.....
Strong, Grover D.....	Colorado.....
Streit, Michael A.....	Iowa.....
Stevens, Walter A.....	Indiana.....
Schoonover, Fred. G.....	Minnesota.....
Scott, Marc W.....	South Dakota...
Sherlock, Laurence E.....	Illinois.....
Strassheim, Arthur G.....	Illinois.....
Sheekey, Charles F.....	Indiana.....
Stich, George F.....	Illinois.....
Stephan, Raymond V.....	Illinois.....
Staples, Weyman P.....	Mexico.....
Stanley, Guy.....	Indiana.....
Sullivan, Jeremiah J.....	Montana .. ..
Sekinger, Francis J.....	Pennsylvania....
Storrs, John H.....	Illinois.....
Shaw, George L.....	Illinois.....
Scheid, George T.....	Ohio.....
Seymour, Gerald.....	Iowa.....
Suberbie, John.....	Mexico.....

Shields, John A. B. ....	Indiana .....
Smithwick, J. Thomas.....	Indiana .....
Schaus, Herbert G. ....	Illinois .....
Schonlau, Claire E.....	Illinois .....
Sweeney, Francis R.....	Washington.....
Snyder, Eness E.....	Montana.....
Soice, Rexford G.....	Iowa.....
Soler, Pedro.....	Cuba .....
Sinnott, Edgar J.....	Indiana .....
Stafford, Franklin H.....	Illinois .....
Shiels, Joseph P.....	Illinois .....
Stuhlfauth, George.....	Wisconsin .....
Savay, Norbert J.....	Switzerland.....
Sullivan, Joseph J.....	Illinois .....
Shea, Wm. A.....	Wisconsin .....
Sweeney, Robert J.....	Washington.....
Sabin, Franklin E.....	Illinois .....
Steward, Arthur W.....	Montana .....
Strickler, Joseph D.....	Indiana .....
Schmidt, Henry C.....	Illinois .....
Sherlock, James P.....	Illinois .....
Sherlock, Charles V.....	New York.....
Schott, Francis L.....	New York.....
Stahlknecht, Edwardo M.....	Mexico .....
Sturla, Francis J.....	Tennessee .....
Smith, Edward C.....	Pennsylvania ....
Seidel, Carlos M.....	Cuba .....
Sauter, Anthony J.....	Indiana .....
Sammon, Andrew J.....	Minnesota .....
Schwab, Francis C.....	Pennsylvania ....
Sutton, James R.....	Iowa .....
Szalewski, Metzislus T.....	Indiana.....
Schumacher, Francis J.....	Indiana.....
Sherry, James J.....	New York.....
Szybowicz, Leon P.....	Indiana.....
Sawkins, Alfred E.....	Illinois .....
Sypniewski, Stanislaus A.....	Indiana .....
Toranzo, Arturo P.....	Peru, S. A.....
Taaks, Harold D.....	Illinois .....
Tansey, Louis J.....	Indiana .....

Trentman, Stephen A.....	Indiana .....
Tillotson, Wm. K.....	Illinois .....
Tuohy, Walter G.....	Illinois .....
Tennyson, Carroll J.....	Ohio.....
Tucker, Joseph W.....	Michigan .....
Torres, Francisco G.....	Mexico .....
Toohy, Joseph L.....	Ohio.....
Taylor, James G.....	New York.....
Taylor, Bryan M.....	Missouri.....
Topper, David J.....	Illinois .....
Tierney, Wm. H.....	Wisconsin .....
Timney, John.....	Ohio .....
Toner, Thomas A.....	Minnesota .....
Uribe, Miguel J.....	Mexico .....
Uribe, Manuel .....	Mexico .....
Uckotter, George H.....	Ohio .....
Usera, Julio J.....	Puerto Rico.....
Usera, Jose V.....	Puerto Rico.....
Vurpillat, Charles A.....	Indiana .....
Vivanco, Edward A.....	Mexico .....
VanDyke, James A.....	Michigan .....
VanDyke, Francis G.....	Michigan .....
Van Sant, Leport R.....	Illinois .....
Van Sant, Ralph N.....	Illinois .....
VonHerbulis, Edward O.....	Virginia .....
VonHerbulis, Albert O .....	Virginia .....
VanDyke, Harold P.....	Michigan .....
Vivanco, Ignacio G.....	Mexico .....
Vilaro, Juan .....	Puerto Rico.....
Verduzco, Felipe G.....	Mexico .....
Vogt, Francis P.....	Indiana.....
Wilken, Fmil J.....	Illinois .....
Whetton, Fred. D.....	Indiana .....
Wren Raphael J.....	Ohio.....
Wurzer, Edward C.....	Michigan .....
Work, Wm. H.....	Arkansas .....
Wade, George A .....	Illinois .....
Weber, L. Kent.....	Ohio .....
Weidman, George S.....	Ohio .....
Weidman, Fritz M.....	Ohio .....

Weber, Allan B.....	Ohio .....
Willard, John A.....	Indiana .....
Wachtel, Winfield W.....	Michigan .....
Wilde, George A.....	Indiana.....
Warner, Harry B.....	Illinois .....
Winter, Aloysius L.....	Pennsylvania ....
Wagner, Lonis E.....	Illinois .....
Woods, James Allen.....	Colorado.....
Weist, John L.....	Utah .....
Winter, Charles A.....	Pennsylvania.....
Winter, August.....	Pennsylvania.....
Winter, Wm. J.....	Pennsylvania.....
Welker, Vincent B.....	Ohio .....
Wilson, Ralph M.....	Pennsylvania....
Walsh, Edward J.....	Wisconsin .....
Wise, Francis A.....	Missouri.....
Weiss, Philip B.....	Pennsylvania.....
Wagner Earl P.....	Indiana .....
Wolfe, Harry M.....	Ohio .....
Warder, Earl B .....	Illinois .....
Winter, Francis M .....	Pennsylvania ....
Welch, Francis M.....	Illinois .....
Wynne, Peter J .....	New Jersey.....
Winter, Francis W.....	Pennsylvania ....
White, Orin A.....	Illinois .....
Wathen, J. Bernard .....	Kentucky.....
Wathen, Otho H.....	Kentucky.....
Walsh, Matthew J.....	Illinois .....
Wimberg, Wm. M.....	Ohio .....
Worden, John.....	New York.....
Warrell, Glenn.....	Illinois .....
Young, George E .....	Illinois .....
Young, John.....	Illinois .....
Ypina, Ignacio.....	Mexico.....
Zolper, Harry W.....	Illinois .....
Ziegler, George F.....	Wisconsin .....
Zerhusen, Francis X.....	Kentucky.....
Zipperer, Francis C.....	Indiana.....
Zeiger, Henry J.....	Ohio .....

Fifty-Sixth  
Annual Commencement.

## CONFERRING OF DEGREES.



**The Degree of Doctor of Laws** was conferred on  
Reverend Peter A. Baart, Marshall, Mich.

**The Degree of Bachelor of Arts** in course was conferred on  
John M. Byrne, Chicago, Illinois.  
Joseph P. Shiels, Chicago, Illinois.  
Vincent D. Dwyer, Anderson, Indiana.  
Patrick J. Dwan, Tipperary, Ireland.  
Hugh S. Gallagher, Donegal, Ireland.  
Edward T. Long, Payne, Ohio.  
James H. McGinnis, Medway, Mass.  
Wm. D. Furry, South Bend, Indiana.

**The Degree of Bachelor of Letters** was conferred on  
Francis B. Cornell, New York City.

**The Degree of Civil Engineer** was conferred on  
Anthony F. Dorley, Lancaster, Penn.

**The Degree of Bachelor of Science in Electrical Engineering**  
was conferred on  
George Stuhlfauth, Wausau, Wisconsin.

**The Degree of Bachelor of Science in Chemistry** was  
conferred on  
John W. Forbing, Kenton, Ohio.

**The Degree of Pharmaceutical Chemist** was conferred on  
Norwood R. Gibson, Peoria, Illinois.

**The Degree of Graduate in Pharmacy** was conferred on  
George A. Senrich, South Bend, Indiana.  
Charles H. Nies, South Bend, Indiana.  
John W. Forbing, Kenton, Ohio.

**The Degree of Master of Laws** was conferred on  
Thomas M. Hoban, South Bend, Indiana.  
Patrick J. Corcoran, Pittsburg, Pennsylvania.  
Edward J. Walsh, Watertown, Wisconsin.  
James F. Murphy, Chebanse, Illinois.

**The Degree of Bachelor of Laws** was conferred on  
Eugene Campbell, Rolla, Missouri.  
William D. Dalton, Elkhart, Indiana,  
Alfred du Perier, New Iberia, Louisiana.  
John W. Eggeman, Fort Wayne, Indiana.  
James F. Fogarty, Philadelphia, Penn.  
William A. Guilfoyle, Mendota, Illinois.  
Thomas A. Medley, Springfield, Kentucky.  
William P. Monahan, Chicago, Illinois.  
William W. O'Brien, Chicago, Illinois.  
Raymond G. O'Malley, Creston, Iowa.  
Paul J. Ragan, Maumee, Ohio.  
Norbert J. Savay, New York City, New York.  
Francis O'Shaughnessy, Chicago, Illinois.

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## Commercial Diplomas.



**Comercial Diplomas** were awarded to  
Edward J. Claffey, Niles, Michigan.  
Charles J. Elitch, San José, California.  
Rawson B. Harmon, Chicago, Illinois.  
Aloysius M. Hierholzer, Celina, Ohio.  
James Pancratz, Perham, Minnesota.  
Albert J. Ross, Springfield, Minnesota.  
Marc W. Scott, Chamberlain, South Dakota.  
José V. Usera, Ponce, Puerto Rico.



Arthur S. Friedman, Chicago, Illinois.  
Lorenzo Hubbell, Ganado, Arizona.  
Charles J. Mulcrone, St. Ignace, Michigan.  
James Coffey, Le Mars, Iowa.  
Ramond V. Stephan, Scales Mound, Illinois.  
Charles E. Daly, Patterson, New Jersey.  
Jacob S. Askanas, Kansas City, Missouri.  
John E. Hayes, Cincinnati, Ohio.  
Harry B. Warner, Chicago, Illinois.  
Thomas M. Harrington, Salix, Iowa.  
Mark A. Devine, Chicago, Illinois.  
William G. Ferstl, South Bend, Indiana.

**Certificates in Telegraphy** were awarded to

James B. Duggan, Creston, Iowa.  
Stanton G. Mooney, Minneapolis, Minnesota.

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## Prize Medals.



**The Quan Gold Medal**, presented by Mr. Henry Quan, of Chicago, for the student having the best record in the Classical Course, senior year, was awarded to John Michael Byrne, Chicago, Illinois.

**The Mason Medal**, presented by Mr. George Mason, of Chicago, for the student of Carroll Hall having the best record for the Scholastic year, was awarded to Francis J. M. Petritz, Rockford, Illinois.

**The Breen Gold Medal** for Oratory, donated by the Hon. Wm. P. Breen, '77, of Fort Wayne, was awarded to Alfred J. du Perier, New Iberia, Louisiana.

**The Meehan Gold Medal** for English Essays, presented by Mrs. James Meehan, Covington, Kentucky, was awarded to

Patrick J. Dwan, Tipperary, Ireland.

**Seventy-Five Dollars in Gold**, presented by a friend of the University for debating work was awarded as follows:

Forty Dollars to Paul J. Ragan, Maumee, O.

Twenty Dollars to William A. McInerney, South Bend, Ind.

Fifteen Dollars to John P. Hayes, Oswego, New York.

**The Ellsworth C. Hughes Medal**, presented by Mr. A. S. Hughes, Denver, Colorado, for the best record in Mathematics, was awarded to

Anthony F. Dorley, Lancaster, Penn.

**The Chicago Alumni Association Gold Medal** for Christian Doctrine in Sojin Hall, was awarded to

William P. Monahan, Chicago, Illinois.

**The Gold Medal for Christian Doctrine** in Corby Hall was awarded to

Vitus G. Jones, Dowagiac, Michigan.

**The Fitzimmons Gold Medal** for Christian Doctrine in Brownson Hall, First Course, presented by the Rev. M. J. Fitzimmons, Rector of the Holy Name Cathedral, Chicago, was awarded to

Henry E. Brown, Lancaster, Ohio.

**The Gold Medal for Christian Doctrine** in Brownson Hall, Second Course, was awarded to

Nathan K. Mills, Thorntown, Indiana.

**The Gold Medal for Christian Doctrine** in Brownson Hall, Third Course, was awarded to

William A. Moore, Danville, Illinois.

- The Gold Medal for Christian Doctrine** in Brownson Hall, Fourth Course, was awarded to  
George J. McFadden, Aledo, Illinois,
- The Gold Medal for Christian Doctrine** in Carroll Hall, First Course, was awarded to  
John M. Quinlan, Rockford, Illinois.
- The Gold Medal for Christian Doctrine** in Carroll Hall, Second Course, was awarded to  
William G. Ferstl, South Bend, Indiana.
- The Commercial Gold Medal** for highest standing in the senior year Commercial, was awarded to  
José V. Usera, Ponce, Puerto Rico, W. I.
- The Barry Elocution Medal** in Brownson Hall, donated by the Hon. P. T. Barry, of Chicago, was awarded to  
Harry V. Crumley, Cincinnati, Ohio.
- The Gold Medal for Elocution** in Preparatory Course, was awarded to  
George E. Gormley, Watertown, Wis.

#### ST. EDWARD'S HALL.

- The Sorin Elocution Gold Medal** was awarded to  
Louis A. McBride.
- The Elocution Gold Medal** was awarded to  
Lawrence A. Hart.
- The Gold Medal for Christian Doctrine** was awarded to  
William McLean.
- The Gold Medal for Composition** was awarded to  
Alvah C. Bosworth.
- Gold Medal for Letter-Writing** was awarded to  
John T. McMahon.
- The Gold Medal for Penmanship** was awarded to  
Paul H. McBride.

**The Gold Medal for Mandolin** was awarded to  
Francis R. Sweeney.

**The Gold Medal for Piano** was awarded to  
William J. McNamee.

**The Gold Medal for Violin** was awarded to  
George J. McNamee.

**Silver Medal for Violin** was awarded to  
William J. Butler.

**Silver Medal for Politeness** was awarded to  
John B. Ervin.

**Silver Medal for Mandolin** was awarded to  
George Philips.

**Silver Medal for Composition** was awarded to  
Kenyon W. Mix.

**Silver Medal for Improvement in Composition** was awarded to  
James M. Carroll.

**Silver Medal for Penmanship** was awarded to  
Wilson Robbins.

**Silver Medal for Letter-Writing** was awarded to  
Milton Flynn.

**Silver Medal for Improvement in Letter-Writing** was  
awarded to  
Charles A. Winter.

**Silver Medal for Improvement in Vocal Music** was awarded to  
Bernard J. Mulligan.

**Silver Medal for Improvement in Penmanship** was awarded  
to  
Hugh C. Ratchford.

**Silver Medal for Christian Doctrine** was awarded to  
August Winter.

**Silver Medal for Improvement in Piano** was awarded to  
William H. Kasper.

## First Honor Awards.



[First Honors are awarded to students of Sorin, Brownson and Corby Halls, who have attained an average of at least 90 per cent. for scholarship and deportment during the scholastic year. The first honor awarded for the first year takes the form of a diploma; that awarded for two years of satisfactory work is a gold medal. This medal may be renewed from year to year.]

### SORIN HALL.

First Honor Gold Medals were awarded to

Francis B. Cornell, New York City, N. Y.

Anthony F. Dorley, Lancaster, Penn.

Philip B. O'Neill, Anderson, Indiana.

William P. Monahan, (renewal), Chicago, Illinois.

### CORBY HALL.

[No First Honor Medal awarded this year.]

### BROWNSON HALL.

First Honor Gold Medal was awarded to

Anton C. Stephan, Scales Mound, Illinois.

### SORIN HALL.

First Honor Diplomas were awarded to

George W. Burkitt, Palistine, Texas.

Eugene Campbell, Rolla, Missouri.

Alfred J. du Perier, New Iberia, Louisiana.

George J. Hanhauser, St. Mary's, Penn.

Robert A. Krost, Crown Point, Indiana.

Edward A. Rumely, LaPorte, Indiana.

## CORBY HALL.

**First Honor Diplomas** were awarded to  
Nathan K. Mills, Thorntown, Indiana.  
José V. Usera, Ponce, Puerto Rico, West Indies.  
Orvin A. White, Hanover, Illinois.

## BROWNSON HALL.

**First Honor Diplomas** were awarded to  
Lawrence M. Antoine, Somonunk, Illinois.  
Henry E. Brown, Lancaster, Ohio.  
John H. Drachbar, Lancaster, Pennsylvania.  
Charles E. Daly, Patterson, New Jersey.  
Aloysius M. Hierholzer, Celina, Ohio.  
George J. McFadden, Aledo, Illinois.  
William A. McInerney, South Bend, Indiana.  
James Pancratz, Perham, Minnesota.  
Patrick J. McDonough, New York City, N. Y.

## Department Prize Medals.



[Gold Medals for Department are awarded to pupils of Carroll and St. Edward's Halls, who have spent two full years at Notre Dame, and whose department during the whole time has been unexceptionable.]

### CARROLL HALL.

Gold Medals for Department were awarded to

August J. Brown, Arthur A. Flynn, Miles E. Flynn, Nicholas J. Hogan, Edward A. Macdonald, Charles C. Nissler, George J. McCambridge, Vincent F. Romero, William H. Reihing, John H. Storrs, John A. Willard, Albert L. Krug (renewal 2d time), Laurence H. Luken (renewal), Thomas E. McCarthy (renewal 2d time), John L. Putnam (renewal), John M. Quinlan (renewal).

### ST. EDWARD'S HALL.

Howard C. Carey, William J. McMahon, Jasper J. Lawton, Clarence J. McFarland, Bryan M. Taylor, Huntington St. Clair, Louis A. McBride. Renewals—John B. Ervin, Albert C. Fuchs, Benjamin J. Houser, David J. Topper, William J. Butler.

[Silver Medals for Department are awarded to pupils of Carroll and St. Edward's Halls, who have spent two full years at Notre Dame, and whose department has given general satisfaction.]

### CARROLL HALL.

Silver Medal for Department was awarded to  
Henry Muno,

### ST. EDWARD'S HALL.

Simon R. Dee, Lorenzo J. Deur, John L. McBride.  
Renewals—Frederick J. Fogarty, George Philips.



## NEEDS OF THE UNIVERSITY.



Visitors to Notre Dame judge from the appearance of the buildings and grounds that the University has no need of money. It is, nevertheless, absolutely without endowment, and its work is seriously hampered because it has no resources except the fees of the students. There is *one* scholarship, and the interest from this foundation is used in educating and boarding a student.

There were last year 1,452 Catholic students in 6 per centum of the non-Catholic colleges of America, and very many of these will lose their faith, and all will be weakened in that faith, because our people look upon Collegiate Institutions as the property of private corporations which are to be left to take care of themselves.

Notre Dame asks for scholarships for boys that can not pay the expense of education, and who therefore are obliged to go to non-Catholic Colleges to the detriment of their faith. A foundation of \$5,000 will educate and board a student as long as the University exists. As one bursar is graduated another can take his place. The founder of the scholarship, of course, always has the privilege of appointing the student.

We lack money for a library building, and for two more dwelling-halls like Sorin Hall.

Two or three thousand dollars are required for finishing and equipping the new gymnasium.

Foundations for scholarships are also a pressing need.

There is no Library fund for the purchase of new books.

The names of benefactors will be given to all foundations.

Bequests should be made after this form :

UNIVERSITY OF NOTRE DAME.

---

*I give, devise and bequeath to the University of  
Notre Dame du Lac, an institution incorporated  
under the laws of the State of Indiana, and located  
at Notre Dame, Indiana, \_\_\_\_\_*

## The Notre Dame Scholastic,

Is the title of a neat 28-page paper, devoted to the interests of the students, and published by them at the University every week during Term time. This journal opens a field for young writers who might otherwise, for want of a proper medium, allow their talents to remain inactive. It also affords students an opportunity for practical experience in journalism. During seasons of special interest at the University, THE SCHOLASTIC is published daily.

THE SCHOLASTIC contains articles of an instructive literary character, interesting Biographical Sketches, Essays, Poetry, Notes on Art, Music, Science and Literature, Notes of New Publications, etc., etc.

In addition to its literary departments, THE SCHOLASTIC has a special importance for students, their parents, and all who have had classes at the University in times past, an account of the weekly summary of events happening at Notre Dame, personal Notices of former students, Class Honors, List of Excellence, etc., which appear in its columns every week. Reports relative to the arrangement of classes, the promotion of the more talented and energetic students, etc., also find a place in this paper and keep the parents and others informed about matters that concern their children and friends.

It will be the endeavor of the Editors during the coming year to merit the encouragement given the paper in the past, and the encomiums bestowed upon it by the press in general.

THE SCHOLASTIC will be sent to any address for \$1.50 per annum.

Address all communications to THE NOTRE DAME SCHOLASTIC, NOTRE DAME, INDIANA.

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# St. Mary's Academy.

(One Mile West of the University of Notre Dame.)



**S**T. MARY'S ACADEMY for young ladies, now entering upon its forty-sixth year of active educational work, has earned the reputation of being one of the most thoroughly equipped and successful institutions in the United States. The location is on the dividing ridge of the St. Lawrence and Mississippi river systems, in the highest and most healthful part of the State. The Academy buildings—large, well ventilated and commodious, and supplied with all modern conveniences—are beautifully situated on an eminence over-looking the picturesque banks of the St. Joseph River.

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including Greek, Latin, French, Spanish and German are taught by a Faculty of competent teachers. On completing the full course of studies students receive the

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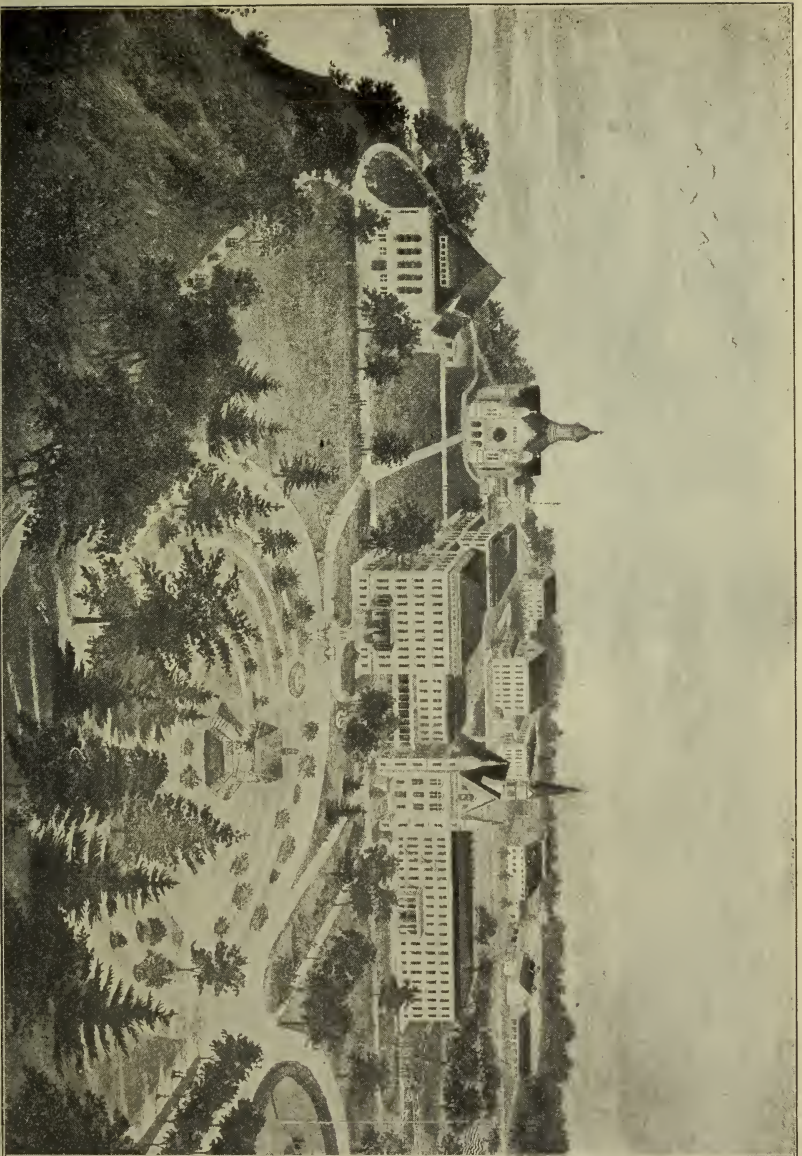
For catalogue containing full information, address

DIRECTRESS OF THE ACADEMY,

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UNIVERSITY OF NOTRE DAME.  
Notre Dame, Indiana

E. A. MERRILL DEL. & C.

CATALOGUE

OF THE

UNIVERSITY OF NOTRE DAME

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1900-1901.



# DIRECTORY OF THE UNIVERSITY.

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The FACULTY—Address:

NOTRE DAME UNIVERSITY,

NOTRE DAME, INDIANA.

The STUDENTS—Address:

As for the Faculty, except that the name of the HALL in which the Student lives should be added.

A Postoffice, a Telegraph Office, and an Express Office are at the University.

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The University is two miles from the city of South Bend, Indiana, and about eighty miles east of Chicago. The Lake Shore & Michigan Southern, the Grand Trunk, the Vandalia, the Indiana, Illinois & Iowa, the St. Joseph, South Bend & Southern, and the Michigan Central railways run directly into South Bend.



# CALENDAR OF THE UNIVERSITY FOR 1901-1902.



- SEPTEMBER 10. Examination of Conditioned Students.  
 11-12. Entrance Examinations.  
 13. Schools Begin.  
 22. Reading of the University Regulations in all the Halls.
- OCTOBER 13. Founder's Day. Holiday.  
 25-26. Bi-Monthly Examinations.  
 29. Annual Retreat begins in the Evening.
- NOVEMBER 1. Feast of All Saints. Holiday.  
 28. Thanksgiving Day. Holiday.  
 30. President's Day. Holiday.
- DECEMBER 8. Feast of the Immaculate Conception. Holiday.  
 19-20. Winter Examinations. Thursday and Friday.  
 21. Christmas Vacation Begins.
- JANUARY 3. Schools Begin.
- FEBRUARY 22. Washington's Birthday. Holiday.  
 24-25. Bi-Monthly Examinations.
- MARCH 17. St. Patrick's Day. Holiday.  
 19. St. Joseph's Day.  
 30. Easter Day. *No Vacation at Easter.*  
 31. Easter Monday. Holiday.
- APRIL 25-26. Bi-Monthly Examinations.
- MAY 1. Latest Date for handing in Prize and Graduation Essays in all Collegiate Courses.  
 21. Contest in Elocution.  
 29. Decoration Day. Holiday.  
 30. Contest in Oratory.
- JUNE 13 14. Examination of Graduates Begins.  
 15. Baccalaureate Sermon.  
 16-17. General Examinations.  
 17. Commencement. Preliminary Exercises,  
 7:30 P. M.  
 18. Graduation Exercises, 8:00 A. M.

Notre Dame Univ.

3810

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\* Died, January 14, 1901.

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Instrumental Music.



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PHILIP B. WEISS, JR.,  
Gymnastics.

# NOTRE DAME UNIVERSITY.



The University of Notre Dame was founded in the year 1842, by the Very Reverend Edward Sorin, the late Superior General of the Congregation of the Holy Cross. In an act approved January 15, 1844, the Legislature of Indiana gave the University power to grant degrees. The beginning of this act is:

*"Be it enacted by the General Assembly of the State of Indiana, That Edward Frederick Sorin, Francis Lewis Cointet, Theophilus Jerome Marivault, Francis Gouesse, and their associates and successors in office, be, and are hereby constituted and declared to be, a body corporate and politic, by the name and style of the 'University of Notre Dame du Lac,' and by that name they shall have perpetual succession, with full power and authority to confer and grant, or cause to be conferred and granted, such degrees and diplomas in the liberal arts and sciences, and in law and medicine, as are usually conferred and granted in other Universities in the United States, provided, however, that no degree shall be conferred or diplomas granted, except to students who have acquired the same proficiency in the liberal arts and sciences, and in law and medicine, as is customary in other Universities in the United States."*

## UNIVERSITY BUILDINGS.



### THE MAIN BUILDING.

The dimensions of this building are 320 by 155 feet; it is five stories in height, and it is surmounted by a dome 207 feet in height. The executive offices, two study-halls, some dormitories and class-rooms and the refectories are in this building. The Library and the Bishops' Memorial Hall are also there temporarily. This building, like all others in the University, is lighted by electricity and gas, and heated by steam. The corridors of the first floor are decorated with mural paintings by Gregori. All the University buildings are made of yellow brick.

### THE CHURCH.

This building is 275 by 120 feet in ground dimensions and 125 feet in height from the ground to the roof-ridge. The interior is decorated by Gregori, and the architecture is Gothic. There is a large crypt and many chapels. In the tower are a chime of 32 bells and the great six-ton chief bell.

### THE LIBRARY.

The Library contains 55,000 volumes. Students have access to it from 8:00 A. M. to 9:00 P. M.

### WASHINGTON HALL.

This hall is 170 feet in length, 100 feet in width, and about 100 feet in height. It contains the rooms of the Musical department, the reading rooms for Brownson and Carroll Halls, and the University Theatre. The Theatre is equipped with stage settings, and it will contain 1,200 persons.

## SCIENCE HALL

is situated a few steps south of Washington Hall. The dimensions are 104 by 131 feet, and it is three stories in height. A large central space, the full height of the building, is occupied by the Museum containing mineral, fossil, and biological specimens.

## THE CHEMICAL DEPARTMENT

occupies the entire north side of the first and second floors of Science Hall.

On the second floor, and adjoining the General Museum, is a large and well lighted room reserved for a library and chemical museum. Here are a library of chemical journals and books, and a steadily increasing collection of minerals, chemicals, and chemical-technical products of all kinds, designed to serve as illustrations of substances and processes discussed in the various lecture courses. Adjoining this room are, successively, an apparatus-room, filled with the most modern apparatus for lecture and experimental work; a chemical store room, where laboratory supplies may be procured by the students; a lecture room, and a laboratory for Qualitative Analysis. The laboratory is furnished with four hoods, of good draught; the desks are provided with water, gas and the necessary reagents, and can furnish accommodation for fifty students. The lecture room is provided, among other things, with apparatus for stereopticon illustration, with electric batteries, and with a complete set of charts illustrative of the process employed in modern chemical industries.

The assay and furnace-room, on the first floor is equipped with a set of gas furnaces of the most modern type, for the operations of roasting, fusing, scorifying and cupelling employed in the dry assay of ores.

## The Department of

### PHYSICS AND ELECTRICAL ENGINEERING

is located in the south wing. There is a large lecture room, with a seating capacity for sixty-five students, adjoining the rooms in which the apparatus is stored in dust-proof cases. Several smaller rooms in the basement contain heavy piers of masonry, for work with sensitive galvanometers.

The following is a partial list of the more important pieces of apparatus in the Physical Laboratories:

#### IN MECHANICS, ETC.:

Large physical balance,	Compound pendulum,
Standard kilogram,	Break circuit chronograph,
Standard meter,	Powerful hydraulic press with
Geneva cathetometer,	attachments,
Dividing engine,	Rotary air pump and receivers.
Atwood's machine,	

#### IN ACOUSTICS.

A Mercadier radiophone,	Three sets of organ pipes,
Set of Köenig resonators,	Four sets of fine tuning forks,
Set of electrically-operated tuning forks by Köenig,	Edison phonograph,
A Scott-Phonautograph,	Apparatus for manometric obser-
Köenig's movable turning forks	vation of sound phenomena,
to draw compound curves on	Sets of vibrating rods, tubes and
smoked glass,	bells,
	Large double siren.

#### IN LIGHT:

Complete set of diffraction and interference apparatus by Soleil, Paris,	Two heliostats,
	Four spectroscopes,
Sets of polarizing apparatus,	A polarizing saccharimeter,
Sets of lenses and spherical mirrors,	Three projecting lanterns for gas or electric light, and 2,000 slides,

- |   |  |
|---|--|
| Two Rowland gratings, 14,000 lines to the inch,   | Several cameras with lenses and attachments,     |
| Sets of photographs of solar spectrum by Rowland, | A well equipped dark-room for photographic work. |

## IN HEAT:

- |  |  |
|--|--|
| Melloni's apparatus for measuring radiation, absorption and reflection of heat, complete with prepared substances, | Standard thermometers,<br>Air thermometer,<br>Steam engine indicator,<br>Calorimeters. |
|--|--|

## IN ELECTRICITY AND MAGNETISM:

- |  |  |
|--|--|
| An absolute electrometer,                                      | Six bridges of different types,  |
| Holtz machine and apparatus for illustrating static phenomena, | Historical set of motors showing evolution of the modern machine from the early forms of the reciprocating type, |
| Ten galvanometers of various types,                            | Standard resistance coils,   |
| Ammeters and voltmeters,                                       | Set of storage cells,  |
| One 2,000 lb. electro magnet,                                  | Complete X-ray outfit.   |
| Four induction coils,  |  |

In addition to the electrical apparatus in the Department of Physics, the equipment for the practical work in Electrical Engineering consists of engines, dynamos and instruments of commercial size, as follows:

- |   |  |
|---|--|
| A high frequency 1000 V, 33 K. W., composite wound, Wood alternator of the latest type, with exciter and a full set of switchboard instruments, | A power or foot lathe with wood turning tools, drills and hand tools for metals, |
| Several transformers of different capacity,   | A set of wood working tools,   |
| An Edison bipolar 15 K. W. 125 V, generator,  | A set of tools for metal working,  |
| A Thompson-Houston arc light machine with regulator and fifteen lamps,  | Telegraph and telephone apparatus,   |
| An Edison bipolar 3 K. W. 125 V, with special winding,  | Standard portable bridge,  |
| A Van Depoele compound wound dynamo,  | Common portable bridge,  |
|   | Kohlrausch bridge for measuring battery resistance, etc.,                        |
|   | Testing battery,   |
|   | D'Arsonval and common galvanometers,   |
|   | Resistance boxes, standard megohms, etc.,  |



- |  |  |
|--|--|
| <p>A series wound dynamo with wrought iron field,</p> <p>A number of small motors,</p> <p>A forty horse power high speed automatic engine,</p> <p>A plug switchboard controlling all circuits,</p> <p>A calibrating lamp rack,</p> <p>A small engine belted to shafting to drive a plating dynamo and a buffer for cleaning and polishing work to be plated; solutions, tank, etc.,—in all a complete outfit for electrolytic work</p> | <p>A number of ammeters and voltmeters, mostly of the Weston type for direct current measurements,</p> <p>A set of inclined coil alternate current portable instruments; voltmeter, ammeter and wattmeter,</p> <p>A case of marked samples of wire insulators, lamps, and other construction materials,</p> <p>Library of practical technical books of reference and files of leading periodicals.</p> |
|--|--|

#### EQUIPMENT IN THE DEPARTMENTS OF BIOLOGY, GEOLOGY, AND MINERALOGY.

The Department of Biology, on the north side of the second floor of Science Hall, consists of three large classrooms and laboratories properly ventilated and lighted. There are also private laboratories set apart for post-graduate students. All the class rooms are furnished with charts and models necessary in teaching the different courses. The arrangement of windows is such that the rooms can be easily darkened so that a stereopticon and lantern slides on the subjects of Botany, Zoology, and Physiology may be used.

The Laboratories are well equipped with compound and dissecting microscopes, and in each room there is a library of books pertaining to Biological subjects. The Botanical laboratory contains twenty-four compound microscopes and all the requisite accessories for work in vegetable histology and cryptogamic botany. The general laboratory of microscopy, histology and embryology is also supplied with compound microscopes and their necessary accessory apparatus and other equipments indispensable in the three courses mentioned above.



The Bacteriological Laboratory is completely equipped with compound microscopes, incubators, sterilizers, and all the improved apparatus employed in thorough and careful work in Bacteriology. Apart from the others is a laboratory of Photo-Micrography which contains a perfect photo-micrographic instrument with a complete set of accessory apparatus for experimentation, photographing microscopic objects, making lantern-slides, etc. A large and fully equipped dark-room adjoins this laboratory.

The south side of the second floor consists of class-rooms, and laboratories for the courses in Geology and Mineralogy. The laboratories adjoining the class-rooms are well equipped for work in blow-pipe analysis and assaying.

#### THE MUSEUM,

connected with the departments described above, is well arranged for convenience of study. The Zoological collection on the second floor at present fills sixteen large cases and represents typical forms of all the orders and genera of vertebrate and invertebrate animals. A large collection of representative vertebrate skeletons has recently been added to this part of the Museum.

The Botanical collection, also on this floor, consists of two complete Herbaria, one of the United States, the other of Canada. There is also a second collection of the woods and fruits of the United States, almost complete.

The collections in Geology and Mineralogy occupy the first floor. These collections are arranged in a series of cases on each side of the building. In one series is a carefully classified collection of minerals and ores. The opposite series of cases contains a large Geological collection; some of the specimens here are of the rarest fossil remains of animal and plant life.

## ENGINEERING HALL.

The building set apart for the students of Engineering is situated directly south of Science Hall. It is a large three-story brick building, well lighted and heated and was carefully designed for the special purpose it serves. Of the three stories, the upper two are divided into lecture, recitation and drawing rooms. These are used exclusively by the Engineering students and are admirably arranged to meet their needs.

The wood shop, machine shop and blacksmith shop are on the first floor. The wood shop is supplied with modern work-benches fully equipped with the smaller tools necessary for carpentry, twelve lathes, for turning, a jig saw, a revolving planer, a circular saw, and a mortising machine,—the whole forming an adequate equipment for a thorough mastery of scroll work and pattern making. The machine shop contains two steam engines, one horizontal, the other vertical, and from these power is distributed to the various machines by a line of shafting running the entire length of the building. The latest improved lathes have been provided, nine in number, varying from a five inch swing in the smallest to a large engine lathe of ten inch swing, with sixteen foot bed. Two drill presses, a large planer, a shaping machine, and a Brown and Sharp milling machine complete the equipment, thus making the machine shop a model of its kind. The blacksmith shop has the usual complement for teaching forging, annealing, welding, and tool-making.

The southern portion of the second story of this Hall is used for the

### CIVIL ENGINEERING DEPARTMENT.

The equipment of this department is sufficient for all the practice and exercises in the field necessary to illustrate and teach the practical methods of engineering. The instru-

mental outfit consists of one surveyor's transit, one engineer's transit, with level and vertical circle attached to telescope, one engineer's wye level plane table with all the attachments, clinometers, chains, tapes, etc.

The entire upper floor of this building is given up to chemical laboratories. The Quantitative, Organic, Pharmaceutical, and Elementary Chemistry laboratories are in this story. Each laboratory is provided with ample hood accommodations, and desk is furnished with water, gas and suction. The balance room adjoining contains assay and analytical balances, sensitive to one ten-thousandth of a gramme. The Quantitative laboratory is fully equipped with apparatus for work in gas analysis, organic analysis and with apparatus for "Boiling-Point and Freezing-Point Determinations."

#### SORIN HALL.

This building is 144 feet in length, with two wings 112 feet in depth. It has a basement and three high stories. The building contains 101 private rooms for advanced students. These rooms are furnished and students of the Senior or Junior classes of any of the Collegiate Courses are not required to pay rent. On the first floor there is a chapel, a law lecture-room and a law library. The building is lighted with electricity and heated with steam. In the basement are a recreation room and bath rooms.

#### CORBY HALL.

Corby Hall is a second residence building. It has three stories and a basement, and it is 240 feet in width. There are 125 private rooms for students, with recreation-rooms and a chapel. The building is lighted with electricity and gas and heated with steam. For room-rent and care of the room a fee is charged.

### THE OBSERVATORY.

This building has a revolving dome with an equatorial telescope to which the students of Astronomy have access. The transit-room and the computing-room contain the smaller instruments and the works of reference.

### THE INFIRMARY.

This building is 200 feet by 45 feet in ground measurement and three stories in height. The rooms in this building are for the use of students during illness. The sick are nursed by Sisters of the Holy Cross, and the University physician visits them daily.

### THE GYMNASIUM.

The gymnasium, which was burnt down in November, 1900, was replaced by a building 230 by 100 feet in dimensions. The track-hall is now 100 by 180 feet on the ground: it is used for indoor meets, winter baseball-practice, basketball and military drill. The gymnastic hall is 100 by 40 feet and is furnished with a full set of new apparatus; below that are the offices, dressing-rooms and showerbaths. Friends of the University and the alumni contributed more than \$3000 to the fund for this building.

The Cartier field is an enclosed field for athletic games. There is a prominent grand stand near the baseball diamond and a cinder track, and a portable stand near the football rectangle. The field contains ten acres of ground, and it is a gift to the University from Mr. Warren A. Cartier, C. E., of the class of '87.

### OTHER BUILDINGS.

There is a number of other large buildings connected with the University; of these the principal are: Saint Joseph's Hall, Holy Cross Hall, the Community House, the Presbytery, and Saint Edward's Hall.

## DISCIPLINE.



Official bi-monthly reports of each student's class standing will be sent to parents and guardians.

The Faculty maintains that an education which gives little attention to the development of the moral part of a youth's character is pernicious, and that it is impossible to bring about this development where students are granted absolute relaxation from all Faculty government while outside the class-room. A young man must learn obedience to law by the actual practice of obedience, not by mere theoretical appeals to honor and a non-existent virtue of obedience.

Moreover, the quiet and concentration of mind that are needed for collegiate work are not obtained except when discipline exists.

Therefore the following regulations, shown to be salutary by experience, are enforced at the University.

1. No student shall leave the University grounds without permission from the President or the person delegated to represent him.

2. *Leave of absence will not be granted to students during the term time, except in cases of urgent necessity. There is no vacation at Easter*

3. Students are required to report at the University immediately after arriving at South Bend. This rule is binding not only at the beginning of the scholastic year, but at all other times when leave of absence has been granted. Unnecessary delay in South Bend is looked upon as a serious violation of rule.



4. *Flagrant disobedience to authority, cheating in examinations, the use of intoxicating liquors, immorality, the use of profane and obscene language and unauthorized absence from the college limits* are among the causes for expulsion. In a case of suspension or expulsion for such offences, *no fees will be returned.*

5. No branch of study will be taken up or discontinued without the consent of the Director of Studies.

6. Preparatory students are enrolled in Brownson, Carroll or St. Edward's Hall according to age: boys seventeen years of age or older are sent to Brownson Hall; those over thirteen and under seventeen go to Carroll Hall; and those under thirteen are in St. Edward's Hall.

7. The use of tobacco is forbidden except to those students of Sorin, Corby and Brownson Halls that have received from their parents written permission to use tobacco.

8. Continued violation of regulations in Sorin and Corby Hall's leads to forfeiture of rooms.

9. *While students of all religious denominations are received into the University, it is nevertheless a strictly Catholic institution, and all students are required to attend divine service in the College Church at stated times.*

10. The use of intoxicating liquors is strictly prohibited.

11. To guard against all clandestine and improper correspondence, the President reserves the right to supervise letters to and from students.

12. Undue attention to athletics at the expense of study will not be permitted, but students are expected to take part in outdoor sports and other games.

13. A limited number of athletic contests is permitted with college organizations from without.

14. All athletic associations of the students are strictly

forbidden to countenance anything that savors of professionalism.

15. All athletics will be governed by a Faculty Board of Control. The President of the University and members of the Faculty will compose the Administrative Board, and reserve the right of a final determination of all questions concerning athletics. The Faculty Board will determine the amateur standing of the members of the athletic teams, and apportion the finances. By this means indiscreet and unconsidered actions of the students will be checked.

#### LECTURES AND CONCERTS.

Each winter eminent men are invited to lecture before the students. Concerts are also given monthly by organizations from without.



## MEDALS AND HONORS.

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**The Quan Gold Medal** is awarded yearly to the student in the Senior Class of the Classical Course that has the highest average rate over 80 per centum.

**The Meehan Gold Medal**, founded by Mrs. J. Meehan, of Covington, Ky., is awarded to a Senior student in the English or Classical Course for an English Essay. This medal is awarded only when the best essay has attained a fixed standard.

**The Ellsworth C. Hughes Medal**, presented by Mr. A. Hughes, Denver, Colorado, for the best record in Mathematics.

**The Breen Gold Medal**, founded by Mr. William P. Breen, of Fort Wayne, is awarded for Oratory.

**The Rademacher Gold Medal**, founded by the Bishop of Fort Wayne, is awarded to the student of Brownson Hall having the highest average in Christian Doctrine.

**The Barry Medal**, founded by Mr. P. T. Barry, of Chicago, is awarded in Brownson Hall for Elocution.

**The Mason Medal**, presented by Mr. George Mason, of Chicago, for the student of Carroll Hall having the best record for the Scholastic year.

First Honors are awarded to students of Sorin and Brownson Halls that have maintained throughout the year an average of at least 90 per centum for class-work and observance of regulations. A first-honor man for the first year receives a diploma, the second year a gold medal. The medal may be received also during the succeeding year of the course.

## Expenses.

## EXPENSES.

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Matriculation Fee (payable on first entrance), . . . .	\$ 10.00
BOARD, TUITION, (Latin, Greek and Modern Languages, included) Lodging, Washing, and Mending of Linens, per Session of nearly ten Months, . . . . .	300.00

### PAYABLE IN ADVANCE, as follows:

On entrance in September, . . . . .	\$200.00
January 15th, . . . . .	\$100.00

The charge of \$300 covers the tuition fee, which is fixed at \$100 per Scholastic Year. This latter sum is accepted as an entirety for tuition during the Scholastic Year, and not to be refunded in whole or in part if the student be dismissed for wilful infraction of the fundamental rules and regulations herein stated and hereby brought to his notice; and so likewise in the event of his leaving and absenting himself from the University at any time or for any cause without proper notice and permission. However, an exception is made if it seems to be expedient for him to go to his home because of severe or protracted illness. Degrees will not be conferred on any student whose account with the University has not been settled.

There is no reduction for students that come late in September, nor for those that return late in January.

### SPECIAL EXPENSES.—PAYABLE IN ADVANCE.

#### PRIVATE ROOMS:—

Sorin Hall, Seniors and Juniors Free.	
Sophomores and Freshmen, . . . . .	\$50.00
Corby Hall, . . . . .	\$80.00

While students, as a rule, are advised to confine themselves to the regular studies of the course they have entered, any of the following may be taken at the rate mentioned per Scholastic Year. The charges will be *pro rata* for any portion of the year.

Instrumental Music—Lessons on Piano and use of Instrument.....\$50.00	Telegraphy.....\$25.00 Typewriting—Full Course, (20 lessons) .....\$ 5.00
Use of Piano for advanced Students.....\$30.00	Phonography.....\$25.00 Practical Mechanics.....\$30.00

Lessons on Violin, Guitar,	"Scholastic," College paper \$ 1.50
Flute, Cornet, Clarinet--	Artistic Drawing.... \$25.00
and Mandolin.....\$30.00	Military Uniform.....
Use of each Instrument....\$ 5.00	Applied Electricity.....\$40.00
Vocal Culture.....\$40 00	Special Lecture and Concert
Vocal Sight Reading.. ....\$ 5.00	Course.....\$ 3.00
Elocution—Special Course, \$10.00	Gymnastics — Full Course
Use of Library.....\$ 5.00	(20 lessons).....\$ 5.00
For Laboratory Fees in Regular Courses see pages 68, 108, III, IIII.	

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## GRADUATION FEE.



For all Courses leading to a degree, \$10; Commercial Course, \$5.

### REMARKS.

The Entrance fee, cost of Books, Music and Laboratory fees, etc., are required with first payment.

Remittance should be made by draft, postoffice money order or express, payable to the order of the President.

Checks on local banks are not desirable, and exchange will be charged in all cases.

Term bills and other accounts are subject to sight draft if not paid within ten days after they have been rendered.

*Brownson, Sorin, Corby and Carroll Halls are closed during the months of July and August.*

In consequences of benefactions lately received by the University, a limited number of students aspiring to the ecclesiastical state can be received at special rates. Fuller information can be obtained by addressing the President.

**The year 1901-1902 will open on Tuesday, September 10th.**

# Courses of Instruction.

## COURSES IN PHILOSOPHY.



## I.

(a) **Psychology of the Senses and Nervous System**—This course is a fairly comprehensive treatment of the physical basis of consciousness.

(b) **Empirical Psychology**—Psycho-physical methods and results.

(c) **Rational Psychology**—The problems of the mind. Nature, origin, and destiny of the soul.

[*One term: Lectures four hours a week; student discussions one hour a week.*]

## II.

(a) **The Theory of Knowledge**—A study of the Scholastic doctrine in relation to the teachings of Descartes, Locke, Hume, Kant, Hamilton and Spencer.

[*This course is intended to be an introduction to Logic and General Metaphysics, and will be given at the beginning of the year during the time prescribed for these studies.*]

(b) **Logic**—An examination of the various logical processes and of the methods employed in scientific investigation.

[*Two hours a week for one year.*]

(c) **General Metaphysics**—Transcendental concepts; their value in different systems of philosophy.

[*Two hours a week for one term.*]

(d) **Cosmology**—The fundamental concepts of the Natural Sciences and their place in Thomistic Philosophy, Pantheism, Monism, and Evolution.

*[One hour a week for one term.]*

(e) **Theodicy**—The knowableness of God; His attributes; His presence in the Universe.

*[One hour a week for one term.]*

(f) **Student Discussions**—Once a week throughout the year students will be required to read and discuss papers on various subjects in the field of philosophical inquiry.

### III.

**Principles of Ethics**—(Q. 1.) Man's last End and Happiness; the Purpose of Man in this Life. (Q. 2.) Human Acts; Responsibility; Merit; Obstacles to Human Acts. (Q. 3.) Origin of Morality; Hedonism; Altruism; Sympathy; Essential Difference between Good and Evil; the Constituents of Morality; the Eternal Law. (Q. 4.) The Natural Moral Law; its Existence and Characters; Evolution. (Q. 5.) The Positive Law. (Q. 6.) On Conscience; Good Faith; Doubtful Conscience and Reflex Principles. (Q. 7.) Passions in Practical Life; their Classification; their Imputability. (Q. 8.) The Moral Virtues; Stoicism; Epicureanism; Christianity.

*[Five hours a week for one term]*

### IV.

(a) **Individual Duties**—Notions of Right and Duty. (Q. 1.) The Duty of Man to God; Necessity of External and Public Worship; Obligation of Prayer; the fact of Sacrifice. (Q. 2.) The Duty of Man to Himself: Culture of the Intelligence, the Will, the Imagination, the Memory; Care of the body; Suicide essentially Unlawful. (Q. 3.) The Duty of Man to his Fellowmen; or Truthfulness and



Lying, Homicide and Self-Defence; on Duelling; on Private Ownership, Socialism; Communism; Single Tax; on the Right to Honor and Reputation; on Contracts and Usury.

(b) **Social Duties**—(*Q. 1.*) The Domestic Society and Marriage; Monogamy; Polygamy and Divorce; Relations between Parents and Children. (*Q. 2.*) Education: the Part of the Parents, the Church and the State. (*Q. 3.*) On Slavery in Ancient and Modern Times; Duties of Masters and Servants. (*Q. 4.*) On Capital and Labor.

(c) **Sociology**—Necessity of a Public Society; the City. (*Q. 1.*) Origin of the Civil and Political Organization; Theories of Hobbes and J. J. Rousseau; source of authority in Human Society. (*Q. 2.*) On the Divine Right of Kings; the Absolute Sovereignty of the People; the Reasonable System. (*Q. 3.*) The different Forms of Government; the Primitive Polity; the best Form of Government; Opinions of O. A. Brownson. (*Q. 4.*) On Modern Democracy; the Position of the Church; the Usurpation and Transfer of the Supreme Power; on the Government *de Facto*. (*Q. 5.*) On Despotism; is it Lawful to Resist a Tyrant? Theory of St. Thomas and Machiavelli on Government. (*Q. 6.*) The Distinction of the three Social Powers; Parliamentary and Representative Government. (*Q. 7.*) Qualities of a good Ruler; the Question of the Poor. (*Q. 8.*) Public Liberties; Freedom of the Press and of Conscience; the Right of the Sword; on War and Treaties. (*Q. 9.*) The International Law. (*Q. 10.*) Civilization. (*Q. 11.*) Church and State.

(d) **Government of the United States\***—History of the Constitution; the Legislative Department of the U. S.; the Executive Department of the U. S.; the President and the

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\* This sketch is drawn according to the valuable ideas contained in "The American Republic," by O. A. Brownson, and "The American Commonwealth," by Mr. Bryce.

Cabinet; the Judicial Department of the U. S.; the Supreme Court; the Rights of the States and the United States; Jury, Suffrage and Elections; Ballot Systems; Parties and Party Machinery; Patriotism and Religion.

*This Course is for Classical Students.*

(c) **History of Philosophy\***—Schools and Systems.—*Ancient Philosophy*: Pythagoras.—Anaxagoras—The Sophists and Socrates.—Plato and Aristotle.—Epicurus.—Zeno.—Pyrrho.—Eclecticism and Neo-Platonism.—Cicero and Seneca. *Philosophy of the Middle Ages*—Christian Platonism: St. Augustine.—Scholasticism: St. Thomas of Aquin.—*Renaissance* and modern Philosophy: Neo-Platonism.—Francis Bacon—Thomas Hobbes—Descartes—Spinoza—Leibnitz—John Locke. Materialism.—David Hume.—Kant and his disciples.—Darwin and Monism.—A. Comte and Positivism.—Herbert Spencer.—T. Huxley—Agnosticism and Evolution.

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\* The text-book used is "History of Philosophy," by Alfred Weber.

## COURSES IN GREEK.



## I.

**Homer**—Odyssey.

**Xenophon**—Memorabilia. First Two Books. Accidental forms and Syntactical relations are constantly brought to the student's attention to fix in his mind the principles of Grammar.

**Prose Composition**—The main purpose of this exercise is to teach the student to write Greek according to the spirit of the Greek language. Attention is constantly directed to the difference in form of expression between the English and the Greek.

**Grammar**—Syntax reviewed. *Goodwin.*

*[Five hours a week for one term.]*

## II.

**Homer**—Odyssey.

**Lysias**—Orations, selected.

**St. John Chrysostom**—Eutropius.

**Prose Composition**—See Course I.

*[Five hours a week for one term.]*

## III.

**Homer**—Iliad. First and Fifth Books. Special study of the Homeric language and verse scansion. Grammatical and etymological explanations. Works of reference. Origin of the Homeric poems. General literary characteristics of the poems. Mythology. Homeric Theology.

**St. Gregory**—Macchabees.

Exercises in Prose Composition.

*[Five hours a week for one term.]*

## IV.

**Homer**—Iliad, Sixth Book, and Cursory Reading of entire work. Books of reference and Collateral Reading as in Course III.

**Thucydides**—First Book.

Exercises in Prose Composition.

*[Five hours a week for one term.]*

## V.

(a) **Demosthenes**—De Corona. Review of Political situation and historical facts in reference to the Oration. Review of Æschines' speech on the same subject, and continued reference to the same. Analytical comparisons. Constant attention is paid, throughout the courses, to the exchange of the form of Analytical Elements of the Greek for another more in harmony with the spirit of the English language. The student must be prepared to account for any form of Etymology and to explain any rule of Syntax that he meets in the text.

**Cursory Reading** of Homer's Odyssey. Homer's works considered as the foundation of faith or the Bible of Pagan Greece.

**Practical Exercises** embodying idiomatic expressions and constructions of the authors read.

*[Five hours a week for one term.]*

## VI.

**St. Basil**—De Profanis Scriptoribus. Literary appreciation of the 4th Century of the Christian Era, the Golden Age of Christian Literature. The Greek Fathers of the Church shown to be the peers of Demosthenes and Cicero in purity of language, sublimity of style and oratorical success. The end in view turns the scale in their favor. References made to Pagan authors quoted by St. Basil. The advantages of a

Classical Education in general, and of the study of Greek in particular are dwelled upon as a mental training and preparation for the literary and scientific professions.

**Sophocles**—Œdipus Tyrannus. Read with special reference to the economy of the Greek Drama, its origin in religion, its religious features, its moral, its metrical mechanism and its adaptability to the Modern Stage. Grecian costumes, Grecian stage and theatrical outfits. Digest of the Theban Legends.

**Short Prose Compositions**—Special attention is here given to the Greek element in the English language, which is casually observed in all the Courses.

**Elements** of Greek Literature.

*[Five hours a week for one term.]*

## VII.

**Plato**—Apology and Crito. In connection with this author enlargements are made upon Athenian life, Athenian jurisprudence, Athenian court proceedings. Socrates, a philosopher or a sophist? His friends and his enemies.

**Euripides**—Medea, or Iphigenia in Aulis, with literary digest of the myths and legends touched upon in these dramas. The Greek Drama continued as in Course VI. Religious tendencies of Euripides.

**Pindar**—Select Odes. The public games of Greece. Reading at sight of Heyne's Greek notes on the Odes read in class.

**Exercises**—Modern Greek compared with the Ancient. Deviations in form and expression pointed out. Modern pronunciation discussed, but not adopted. Reading at sight of Professor's collections of Modern Greek Stories, and Anecdotes. The latter are reproduced in Ancient Greek.

**History of Greek Literature.**

*[Five hours a week for one term.]*

**VIII.**

**Cursory Reading** of the Greek Fathers of the Church. St. Basil—The Martyr Gordius. St. John Chrysostom—The Return of Bishop Flavian. St. Gregory Nazianzen — Funeral Oration of Cæsarius.

**Reading at Sight**—The Professor's Epitome of the New Testament.

**Sophocles**—Philoctetes or Antigone.

**Aristophanes**—Frogs and Clouds. Greek Comedy; its nature; its aim. Political Situation, Party Spirit, and work of Secret Societies in Athens during the Peloponnesian War. Religious and Philosophical Revolutions of the time. Conservatism of Æschylos and Sophocles as compared with the compliant spirit of Euripides. Aristophanes as opportune in the 20th Century as in his own days of enlightenment.

**Modern Greek**—Reading at sight of *Ἡ Μαυρὴ Ὠραιότης*.

**History of Greek Literature.**

*[Five hours a week for one term.]*

## COURSES IN LATIN.



## I.

**Cicero**—Select Letters. Orations.

**Latin Composition** based on Cicero's text.

**Virgil**—Æneid. First and Second books. The explanations cover peculiarities of Syntax, Figures, Mythology, Versification. Collateral reading is indicated to the students.

**Prosody**—Ordinary Rules of Prosody. Practical Work.

*[Five hours a week for one term.]*

## II.

**Cicero**—De Senectute or De Amicitia.

**Latin Composition** based on Cicero.

**Virgil**—Æneid. Fourth Book with complete explanations. Fifth and Sixth Books. Collateral Reading indicated to the student.

Practice in Latin Conversation.

**Prosody**—Completed.

## III.

**Livy**—Book XXI.

**Latin Composition** based on Livy.

**Horace**—Odes and Epodes. The explanations include the study of the Metrical Systems, Peculiarities of Style, Plan of the Composition, Comparison with Odes of a similar nature. Collateral reading indicated to the student.

Practice in Latin Conversation.

**Versification**—Weekly exercises. Original Latin Composition.

*[Five hours a week for one term.]*



## IV.

**Livy**—Book XXII.

**Latin Composition** based on Livy.

**Cicero**—De Oratore, First Book.

**Horace**—Odes and Epodes continued. See Course III.  
Practice in Latin Conversation.

**Versification**—Original exercises. Original Latin Composition.

*[Five hours a week for one term.]*

## V.

**Livy**—Roman History, First Book. In the reading of the text particular attention is called to the rules of Syntax—roots and derivation of words—and to Ancient History, Geography and Mythology.

Latin Composition twice a week, either paraphrases or original. Short fables and stories.

**Horace**—Epistola ad Pisones translated, analyzed and criticized from a Philological and Literary standpoint.

Three select Satires, First Book.

**Ancient Literature**—Historians and Lyric Poets: their lives, their works, their genius.

*[Five hours a week for one term.]*

## VI.

**Tacitus**—Agricola and Germania. While reading the text a comparison is made with the private and public manners of modern nations.

**Terence**—Andria. Sight reading.

**Horace**—The Literary Epistles and a few of the Moral Satires.

Weekly practice in written Composition, Latin Conversation and Versification.

**Ancient Literature**—Dramatists of Greece and Rome compared and discussed.

*[Five hours a week for one term.]*

## VII.

**Quintilian**—De Institutione Oratoria, Books Tenth and Twelvth. Translation. Explanation embraces a literary criticism of Grecian and Roman Orators, and practical remarks on Latin Idioms and the fine arts of Antiquity.

Short Orations or Dissertations, and practical Conversations take place weekly.

**Plautus**—Captivi. The study of the play gives a full knowledge of the Characters, the Plot, and the Style, the archaic Forms, and the Constructions peculiar to the author.

**Ancient Literature**—Orators, especially Demosthenes and Cicero.

*[Five hours a week for one term.]*

## VIII.

**Cicero**—De Officiis. Partly sight-reading. Besides the study of the work from a philological standpoint, the student is made acquainted with the main systems of Grecian Philosophy, and continual reference is made to Course III. in Philosophy.

Oratorical and Philosophical Compositions alternate weekly. Latin Conversation on general topics.

**Lucretius**—De Natura Rerum. Select passages. Synopsis of the poem. Statement and refutation of erroneous philosophical systems of antiquity. Analogy with the errors of our day. Style of the writer.

**Ancient Literature**—Philosophers, particularly Socrates, Plato and Aristotle, Cicero and Seneca.

*[Five hours a week for one term.]*

## COURSES IN ENGLISH.



### I.

(a) **Rhetoric**—Detailed study of good use. Barbarisms, Improproprieties and Solecisms. Clearness, Force and Ease, as effected by Choice, Number and Arrangement of words. Detailed study of sentences, paragraphs and whole compositions, with critical analysis of selected models. Analytical study of Descriptive Writing (scientific and artistic). Narrative Writing, with special reference to the Short Story. Expository Composition, with special reference to the Essay. Argumentation; burden of proof; presumption; methods; forms and arrangement of argument; persuasion. During a large part of the year the student is required to write a daily theme. The text-book in use is Hill's *Principles of Rhetoric*, supplemented by lectures and notes by the Professor.

(b) **Oratorical Composition**—Invention: proofs, manners, passions, topics; disposition; parts of the discourse; oratorical amplification; briefs; analysis of orations. Elements of Logic with reference to Oratory.

(c) **Readings in Class**:—Spencer's *Philosophy of Style*, Gates' *Selections from Newman*. British and American Orations.

[Five hours a week for two terms.]

### II.

[One theme a week in all classes below.]

(a) **English Prosody**—Scansion, the old method and the method by musical notation; rhythmical units—quantity, accent, the phrase; blank verse, cadences, alliteration.

metre, rime, stanzas, French forms, sonnets, and other lyric forms.

(b) **Dramatic Analysis**—The parts of a tragedy; introductions, scenic passages, rising actions, climaxes, tragic incidents, falling actions, catastrophes, forces, plots, underplots, characterization, nemesis, values, unity, probability, completeness etc. Comedy. Application to Shaksperian plays and to the modern drama.

(c) **Shakspeare**—Reading with literary and dramatic analysis of *Macbeth*, *King John*, *Julius Cæsar*, *King Richard III.*, *Coriolanus*, *As You Like It*, *Twelfth Night*, *Much Ado About Nothing*. Hudson's and the "Arden" texts are used and the entire play is read in each case.

(d) **The History of English Literature up to Shakspeare**—*A Handbook of English Literature*, by Austin Dobson, and Ward's *English Poets* are used to direct this course.

[Five hours a week for two terms.]

### III.

(a) **The Laws of the Epic**, of Prose Fiction, of the Lyric and the Essay. Critical application of the laws to models.

(b) **Shakspeare**—Reading, etc., as in Course II. (c) of *A Winter's Tale*, *Romeo and Juliet*, *King Henry IV., Part I.*, *King Henry IV., Part II.*, *King Henry V.*, *A Midsummer Night's Dream*, *Anthony and Cleopatra*.

(c) **History of English Literature** from Shakspeare to the nineteenth century. Models. Dobson and Ward used as in Course II. (d).

[Five hours a week for two terms.]

### IX.

(a) **Shakspeare**—Reading, etc., as in Course II. (c), of *King Lear*, *Hamlet*, *Othello*, *The Tempest*, *The Merchant of Venice*, *Cymbeline*, *King Henry VIII.*, *King Richard II.*

(b) **The Leading Poets and Prose Writers of the Nineteenth Century.** Lectures.

(c) **Old English**—An elementary course in Anglo-Saxon grammar and reading. (This division of Course IV. is elective.)

*[Five hours a week for two terms.]*

## V.

**Special Course** in Theme Writing for Engineering and Scientific students.

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## Courses in Elocution and Oratory.



### I.

**Readings and Declamations**—This course is designed to correct defects in pronunciation and emphasis. Each student will be required to give two declamations.

*[Two hours a week for first term.]*

### II.

**Continuation of Course I.**—Each student will be required to give three declamations.

*[Two hours a week for second term.]*

### III.

**Practical Elocution**—Exercises in breathing, voice-culture, and action. The principles of pronunciation and emphasis and their application in the reading of selections. Text-book, Fulton and Trueblood's *Practical Elocution*.

*[Two hours a week for first term.]*

## IV.

**Continuation of Course III.**—Further exercises in breathing, voice-culture, and action. Quality, Force, Pitch and Time. Minute speeches and declamations. Lectures on the principles of action. Text-book, Fulton and Trueblood's *Practical Elocution*.

[*Two hours a week for second term.*]

## V.

**Oral Discussions**—The application of Formal Logic to debating. Analysis of selected argumentive speeches, and the preparation of briefs. Courses III. and IV. and a course in Logic are required for admission to this course. It is limited to 24 students.

[*Two hours a week for first term.*]

## VI.

**Shaksperian Reading**—The critical and artistic reading of two of Shakspeare's plays accompanied with stage action. The students present the play by scenes before the class. Courses III. and IV. are required for admission to this course. It is limited to 24 students, and alternates with course VII. below.

[*Two hours a week for second term.*]

## VII.

**Oratory**—A study of the great orators of ancient and modern times. Each student is required to write and deliver a biographical oration on one of the great orators. Lectures on methods of public address. Courses III. and IV. above and course I. in English are required for admission to this course. It is limited to 24 students and alternates with course VI. above.

[*Two hours a week for second term.*]



## VIII.

**Assembly Work**—This course is designed to supplement the other courses in this department. It consists of debates, short orations, minute speeches, declamations, impromptus and drill work in parliamentary law. Wednesday from 1 to 3. One hour credit.

[*Throughout the year.*]

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COURSES IN HISTORY.

## I.

## ANCIENT HISTORY.

(a) **Ancient Greece**—To the conquest by Rome of the Hellenic world. Readings, and examinations on required texts. This course is given in an alternate year with Course I. (b)

[*Four hours a week for one year.*]

(b) **Ancient Rome** to the barbarian invasions. Readings and examinations on required texts. This course is given in an alternate year with Course I. (a).

In both courses, the student is required to become familiar with the institutions of the ancient world, and to study the same in De Coulanges' *The Ancient City*.

[*Four hours a week for one year.*]

## II.

## MEDIAEVAL AND MODERN HISTORY.

(a) **The History of the Middle Ages** from the invasion of the barbarians, and the history of the periods of the Renaissance and the Reformation to 1603. Readings and examinations on required texts.

[*Three hours a week for one year.*]



(b) **The General History of Europe** from the beginning of the 17th century to the present time. Readings and examinations on required texts.

[*Three hours a week for one year.*]

### III.

#### ENGLISH HISTORY.

**The history of the British Isles to the Revolution of 1689—**Readings and examinations on required texts. The student is required to obtain by directed reading and examinations a special knowledge of the development of the political institutions of Great Britain, using Feilden's *Constitutional History*.

[*Four hours a week for one year.*]

### IV.

#### AMERICAN HISTORY.

(a) **American History from its beginning to 1763—**Readings and examinations on required texts.

[*One hour a week for one year.*]

(b) **American History from 1763 to the present time—**Readings, lectures and examinations. There is first given by lectures an outline of the political condition of the Colonies under the Crown, the causes leading up to the Revolution of 1776, the Revolution, the political status of the States after Independence, the Confederation of 1781, the causes leading to the formation of the Constitution, and the Constitutional Convention. This is followed by a thorough treatment of the political history of the United States since 1789, using as an outline text, Johnson's *American Politics*.

[*Three hours a week for one year.*]

## COURSES IN POLITICAL SCIENCE.



(a)

### ECONOMICS.

I. **The Elements of Economics**, viz.:—Land, Human Exertions and Capital; Value, Money and Credit; Rent, Interest, Profit and Wages; and Population and Consumption. The text-book used is Walker's *Manual of Political Economy*.

[*Four hours a week for five months.*]

II. **Industrial History** and the history of Economic Thought. Readings, lectures and examinations on required texts.

[*Three hours a week for one year.*]

III. **Money, Credit and Banking**, with special treatment of the monetary experience of the United States. Lectures, readings, and examinations on required texts.

[*Three hours a week for five months.*]

IV. **Distribution**—A course covering the Land and Labor Questions and Socialism. Lectures, readings and examinations on required texts.

[*Three hours a week for five months.*]

(b)

### POLITICS.

V. **The Elements of Politics**—Lectures and examinations on required texts.

[*Two hours a week for five months.*]

VI. **The American Constitution** and Political Institutions.

Lectures, readings, and examinations on required texts.

[*Two hours a week for five months.*]

**VII. Jurisprudence**—A course covering (a) The outlines of the Science of Law, (b) The elements of International Law, and (c) Lectures on selected topics of Roman and Canon Law. Lectures, readings and examinations on required texts.

[*Two hours a week for one year.*]

(c)

#### SOCIAL SCIENCE.

**VIII. The Elements of Sociology** — Lectures, readings and examinations on required texts.

[*Two hours a week for five months.*]

## COURSE IN ROMANCE LANGUAGE.



This Course includes the study of French, Spanish, Italian, Portuguese, Old French, Provençal.

Its principal aim is to impart an accurate reading knowledge of literary works written in these languages. In the study, however, of Old French and Provençal special attention will be paid to Philology.

#### FRENCH COURSES.

##### I.

Houghton's *French by reading. Un Cas de Conscience.*  
Super's *Reading from French History.*

[*Two hours a week.*]

## II.

French Composition. L'Avare. Le Voyage de M. Perichon. Le Roi des Montagnes. Picciola. Zola's Le Rêve.

[*Two hours a week.*]

## III.

La Poudre aux Yeux. Athalie. Hernani. Les Confessions d'un Ouvrier. Le Barbier de Séville. Le Malade Imaginaire. Les Fourberies de Scapin. Pourceaugnac. Les Fâcheux. L'Amour Médecin. Le Misanthrope. Cinna. Polyeucte.

[*Two hours a week.*]

N. B.—The books used are not necessarily the same every year.

## SPANISH COURSE.

A two years' course. Besides the reading of Modern Authors the masterpieces of Calderon de la Barca, Lope de Vega, Cervantes, etc., will be particularly studied. An optional course of Old Spanish preceded by the philology of the language, enabling the students to better understand the masterpieces of Old Spanish is also offered.

## ITALIAN COURSE.

A two years' course. The chief work of this course is a critical study of Dante's Divina Commedia. Reading from Tasso, Petrarca, Ariosto's Satires, Manzoni, etc.

## PORTUGUESE COURSE.

One year course. Os Lusíadas will be specially studied.

## OLD FRENCH.

Special attention will be paid to the laws underlying the formation of the French language from the popular Latin. For this purpose a work like Brachet's *Grammaire*

*Historique* will be studied. It is under this point of view that Old French authors will be read, especially *La Chanson de Roland*.

### PROVENÇAL COURSE.

Language and literature, with reading from the works of the Troubadours.



### REMARK.

With the exception of French, no one will be accepted for these courses unless he can satisfy the Professor of his ability to read Latin at sight.



## COURSES IN GERMAN.



### I.

**Grammar**—*Joynes-Meissner*. Deutsches Lesebuch, *Bone*.  
**Themes**—Original and imitation work.

[*Three hours a week.*]

### II.

**Special Course** for students in the English and Scientific Courses.

**Grammar**—*Joynes-Meissner*.

**Readings** from scientific and literary works.

[*Three hours a week*]

### III.

**Readings** from scientific and literary works.

[*Three hours a week.*]

## COURSES IN PURE MATHEMATICS.



### I.

**Algebra**—This course includes a study of the binomial theorem, the theory of logarithms, choice, chance, variables and limits, series, determinants. Then follows a thorough study of the general properties and solution of equations, embracing the subjects of derivatives, transformation, detached coefficients, surd and imaginary roots, incommensurable roots, limits of roots, biquadratic equations; Des Cartes' and Cardan's rules; Sturm's theorem; Horner's method; roots of complex number and trigonometric solution of cubic equations.

*[Five hours a week for one term.]*

### II.

**Trigonometry, Plane and Spherical**—Development of general formulæ; functions of a single angle; functions of related angles; functions of sums and differences; functions of double angles and half angles; functions of multiple angles; changing the product of functions into the sum of functions, and the sum of functions into the product of functions; circular functions; development of functions; transformations; solution of triangles; construction and use of tables. The preceding work embraces the general topics studied in the course of plane trigonometry. Additional exercises involving application of theoretical principles are added by the instructor.

In Spherical Trigonometry are studied:—General properties of spherical triangles; solution of right and oblique spherical triangles; special methods involving application of Napier's rules and analogies, and Gauss's equations;

determination of species; spherical excess; area of spherical triangles; miscellaneous applications; astronomical applications. This Course is supplemented by many practical problems and exercises.

*[Plane Trigonometry, five hours a week for twelve weeks.*

*Spherical Trigonometry, five hours a week for eight weeks.]*

### III.

**Analytic Geometry**—This Course includes a study of the point and right line; conic sections, their equations and properties; discussion of the general equation of the second degree containing two variables; higher plane curves; equations of the third degree; different systems of coordinates; transformation of coordinates; spirals; an elementary course in geometry of three dimensions, embracing the point, straight line, plane and surfaces of revolution; transformation of coordinates; quadric surfaces and supplementary propositions.

*[Five hours a week for one term.]*

### IV.

**Calculus, Differential**—This Course, as also Course V., is designed to meet the requirements of Engineering students. It includes a study of the methods for the differentiation of algebraic, logarithmic and exponential, trigonometric, and inverse trigonometric functions; successive differentiation and differential coefficients; treatment of implicit and compound functions; expansion of functions; indeterminate forms; partial differential coefficients of the first order and of higher orders; direction of curvature; radius of curvature; envelopes; singular points of curves; maxima and minima of functions of one independent variable, and of several independent variables; tracing curves; differentials of arcs, plane areas, surfaces and volumes of revolution.

*[Five hours a week for one term.]*



## V.

**Calculus, Integral**—Integration of elementary forms and of rational fractions; integration by rationalization and by parts; successive integration; multiple integrals; definite integration and the constants of integration; integration between limits; disposing of the constant of integration; double integration applied to plane areas; rectification of plane curves; quadratures of plane areas and surfaces of revolution; surface and volume of any solid; intrinsic equation of a curve. This Course is supplemented by numerous exercises and examples.

[*Five hours a week for one term.*]

## VI.

**Elective Work**—The prescribed Courses in Pure Mathematics are I. to V. inclusive. The following advanced Courses are offered, based on standard authors. The textbooks are not necessarily the same every year. The number of students necessary to constitute a class in any one subject must be at least five.

(a) Higher Algebra, *Hall and Knight, Smith, Chrystal*.  
 (b) Advanced work in Trigonometry, *Todhunter, Lock*.  
 (c) Determinants, *Peck, Hanus, Muir*. (d) Theory of Equations, *Burnside and Panton*. (e) Differential Equations, Elementary Course, *Murray*. (f) Advanced Calculus, *Byerly, Todhunter, Williamson*. (g) Advanced Analytic Geometry, *Salmon*. (h) Analytic Geometry of Three Dimensions, *Aldis, Frost, Salmon*. (i) Quaternions, *Hardy*, with *Kelland and Tait* as reference.

[*Three hours' recitation a week for one subject.*]

## COURSES IN APPLIED MATHEMATICS.



## I.

**Descriptive Geometry**—In this Course are considered problems on the point, right line, and plane; single curved, double curved, and warped surfaces; problems relating to tangent planes to single curved, double curved, and warped surfaces; intersection of surfaces by planes; tangencies; development of surfaces; spherical projections; orthographic, stereographic, globular, cylindrical, and conic projections; construction of maps; shades and shadows; linear perspective; isometric projections; theory and plates. Numerous practical problems and exercises requiring the application of the principles of Descriptive Geometry are added by the instructor.

*[Three hours a week for two terms.]*

## II.

**Surveying**—This Course comprises the whole theory of land surveying and levelling; the use and adjustment of the transit, compass, level, and plane table; methods of measuring; relocation of boundaries; supplying omissions; obstacles to measurement; computations; field notes and plots; laying out land; parting off land; dividing up land; Public Lands survey.

*[Five hours a week for one term.]*

## III.

**Surveying**—Field practice and application of theory; adjustments and use of instruments in the field; solution of problems in the field the theory of which is taught in the

class-room; practice in keeping field notes; computations and plots.

*[Four hours a week for the spring term.]*

#### IV.

**Higher Surveying**—This Course is a more complete treatment of the theory of surveying than Course II. and cannot be taken until the completion of that course. It treats of the adjustment, use, and care of all kinds of Engineering instruments; problems pertaining to solar attachment; topographical surveying with the transit and stadia; mining surveying; mining claims; survey of mines with shafts and drifts; determining positions of ends of tunnels, and depths below surface; theory of hydrographic and city surveying; geodetic surveying and levelling; measuring base lines; adjustments of angles, triangles, and quadrilaterals; latitude and azimuth; time and longitude; changing mean time into sidereal time and sidereal time to mean time.

*[Five hours a week for one term.]*

#### V.

**Surveying**—Exercises in the field in the adjustments and use of engineering instruments; stadia and plane table surveying in the field; levelling; practice in hydrographic surveying.

*[Four hours a week for the spring term.]*

#### VI.

**Railroad Surveying**—This Course comprises all the theory pertaining to reconnoissance and preliminary survey for a railroad; theory of maximum economy in grades and curves; location of curves by deflection angles and offsets; obstacles to location of curves; special problems in curves; theory of compound curves; turnouts and crossings; compound transition curves; cubic parabola; curving the rail on curves and

elevation of outer rail; easy grade on curves; vertical curves; earthwork and prismoidal formula; theory of excavation and embankment; correction in excavation on curves; cross-sectioning.

*[Five hours a week for one term.]*

## VII.

**Railroad Surveying**—Exercises in the field; staking out and running tangents, simple, compound and transition curves; execution on the ground of many problems previously treated theoretically; survey for a short line of railroad, levelling, cross-sectioning, and setting slope stakes; making profiles and maps; calculating the necessary excavations and embankments and cost of construction; culverts.

*[Four hours a week for one term]*

## VIII.

**Analytic Mechanics**—The aim of this course is to prepare students of Engineering for the study of the courses of Applied Mechanics. The course comprises a study of the fundamental principles of Statics, Kinematics, and Kinetics. The subjects selected are studied with the object of thoroughly preparing the engineering students to pursue the technical and practical branches of their respective courses. Some of the topics considered in this course are: work, energy, conservation of energy, power, composition and resolution of forces, centre of gravity, centre of mass, moment of inertia, acceleration, dynamics of rigid bodies, laws of friction, etc.

*[Five hours a week for one term.]*

## IX.

**Mechanics of Materials**—This course is intended to meet the requirements of Engineering students, and to prepare

them by a study of the action and effect of forces on beams and structures to design economically and intelligently the parts entering into a complete structure. The course comprises a study, according to the latest and most approved methods, of tension and its effect on material, compression, theories of flexure and rupture from transverse stress, shearing stresses, transverse strength, beams of uniform resistance, various forms, and loaded in any manner; design and strength of beams and columns, effect of long continued strains, and repeated strains, factor of safety and working stresses, strength of pipes and cylinders, theory and practice of riveting, torsion, transmission of power by shafts, continuous girders, equation of curves of deflection, theorem of three moments, moment at any support, etc.

*[Five hours a week for one term.]*

## X.

**Bridges and Roofs**—This Course comprises a study of the different systems of trussed bridges and roof trusses, and the calculation of the strains produced when loaded in any manner, the weight of the structure and the effect of wind included. Both graphical and analytical methods are used. Besides the various systems of trussed bridges, which are studied in detail, the plate girders, suspension bridges, cantilever bridges, draw bridges, and roofs of various designs are given equal attention, the purpose being to familiarize the student with the different forms and to enable him to design and to estimate the cost of construction.

*[Three hours a week for one term.]*

## XI.

**Graphical Statics**—This Course teaches the determination of stresses in framed structures by the graphical method.



Sheering forces, bending moments, centres of gravity, and moments of inertia are graphically determined by the application of the principals of the force and equilibrium polygons; as also stresses in bridge and roof trusses; graphical treatment of the arch, symmetrical and unsymmetrical cases; graphical method for arch-ribs of hinged ends, and of fixed ends; stress diagrams; temperature stresses; braced arches; graphics applied to continuous girders. This Course is supplemented by full explanations, notes, examples, and problems.

*[Three hours a week for one term.]*

## XII.

**Engineering**—This Course is taken by students of Civil Engineering in the Senior Year, and teaches the principles of the science of Civil Engineering and the most approved methods of constructing engineering works, such as piers, abutments, foundations, coffer dams, reservoir walls; instruction as to the types of structures suitable for different localities; economy of construction and framing; properties of building materials, as wood, stone, cement, brick, iron; methods of testing, methods of preparation, preservation and cost; construction of masonry arches, tunnels, sewers, highways, and city streets; discussion of framed structures of different types; river and harbor improvements; canals; seacost defences.

*[Five hours a week for two terms.]*

## XIII.

**Sanitary Engineering**—This Course is a study of the principles and methods of drainage and disposal of sewage in populous districts; shape material and calculation of sewers; catchbasins, flushing and ventilation; separate and combined systems compared; pollution of rivers; chemical

precipitation; results and cost of purification; general municipal and domestic sanitation; inspection of neighboring works.

*[Two hours a week for one term.]*

#### XIV.

**Stereotomy**—This Course comprises a study of the application of the principles of Descriptive Geometry to the determination of the forms and sizes of the stones used in the construction of the different classes of arches and masonry structures. This Course is given by lectures in the Drawing Room, explaining the construction of templets, and use of directing instrument; also explanations of methods of drawing plans, elevations, and developments of oblique arches, wing wall and the like. A certain number of plates and drawings is required, illustrating the methods of performing practical work.

*[Two hours a week for one term.]*

#### XV.

**Hydromechanics**—This Course is a thorough study of the theory of hydrostatics, hydraulics, and hydrodynamics, to which are added many practical exercises. The subjects considered are the transmissions of pressures; centre of pressures; velocity of flow from orifices of various shapes; fluid friction; Bernoulli's theorem with friction; Chezy's formula; Kutter's formula; flow over weirs, and through tubes; flow in pipes; loss of head in friction and other losses; flow in conduits, canals, and rivers; velocities in cross section; methods of gauging the flow; measurement of water power; dynamic pressure of flowing water; designing of waterworks and standpipes; hydraulic motors and relative merits; dynamics of gaseous fluids; flow through orifices by water formula; with isothermal expansion; with adiabatic expansion.

*[Five hours a week for one term.]*



## XVI.

**Geodesy**—This is an elementary Course prescribed for Civil Engineering students in the Junior Year, and comprises a study of the instruments and methods of observation; base measurements and field work of the triangulation; method of least squares, elementary course; calculation of the triangulation, and theory of probable errors; geodetic latitudes, longitudes, and azimuths. This is followed by a brief discussion of the figure of the earth.

*[Four hours a week for one term.]*

## COURSE IN ASTRONOMY.



### I.

**Astronomy**—Descriptive and Practical. This Course comprises a study of astronomical instruments, their use and adjustment, and methods of observation; problems of finding time, latitude, and longitude; observatory practice; methods of finding the form, size, mass, and density of the earth; earth's orbital motion; equation of time; precession, nutation, aberration, and parallax; general description of the sun; description of eclipses and computation; planetary orbits and computation; problem of two bodies; problem of three bodies; disturbing forces; methods of determining the diameters, masses, densities, times of rotation of the planets; determination of the sun's horizontal parallax and distance, various methods; description of comets, meteors, nebulae, and fixed stars; cosmogony and the nebular hypothesis.

*[Three hours a week for two terms.]*

## COURSES IN MECHANICAL ENGINEERING.



## I.

**Thermodynamics**—The first term is given to a theoretical study of the steam engine, gas engine, and other heat motors involving the laws of thermodynamics of gases, saturated vapors and superheated steam. During the second term the applications of the studies of the previous term are dwelt upon and prime movers, the injector, condenser, refrigerating machinery, boilers, pumps and hydraulic machinery are studied in detail. Frequent reference is made to trade catalogues, of which an adequate supply should be obtained by the student. The text-book used is Thurston's *The Steam Engine*.

*[Five hours a week for two terms.]*

## II.

**Materials of Engineering**—This Course, supplemented by shopwork and laboratory work in testing materials of construction, is designed with the purpose of acquainting the student with the properties of the materials he will use in his profession. Tensile and shearing strength, elasticity and resistance are studied, together with the effects of strain, intermittent loading and impact. The process of manufacture of the most important materials is taken up and estimates of the cost of construction at the market prices complete the work. Thurston's *Materials of Engineering* is the text-book used.

*[Five hours a week for one term.]*

## III.

**Steam Engine Design**—In this Course the forms and sizes of steam engines, computation of dimensions and advantages and adaptation of special forms of engines for specific work are taken up which give the student a thorough knowledge of constructive detail. The latest researches and contemporary practice may be consulted in the numerous publications found in the University Library. During the first term of the Senior Year is required the complete design with working drawings of a simple non-condensing steam engine for a specific purpose. The second term is given to designing a multiple expansion, jacketed, condensing engine for marine service. The text-book used is Whitham's *Steam Engine Design*.

*[Five hours a week for two terms.]*

## IV.

**Steam Boilers**—This subject is treated much as that of the steam engine. The determination of sizes of parts from consideration of strains, thickness of shells, size of rivets, braces, furnaces and proper methods of connection of boilers with efficiency of furnace and life of boiler, are some of the subjects considered. The method of determining the efficiency of fuels, heating surface, heights of chimneys, boiler mountings, and materials used in construction are also discussed.

*[Three hours a week for one term.]*

## V.

**Kinematics**—This Course treats of the geometry of machinery, the determination of the paths of the various parts of an elementary combination and the constraining of the parts to move in these paths. The general theory is then applied to cams and gear teeth, the relative motion of

machine parts and kinematic trains, belts, pulleys, speed cones, link work and other aggregate combinations. Barr's *Kinematics of Machinery* is the text-book used.

[Five hours a week for one term.]

## VI.

**Machine Design**—This work involves a study of the form and strength of machine parts as applied in designing with computation of dimensions for fastenings, bearings, rotating pieces, belt and tooth gearing, etc. The derivation of rational formulæ and the determination of empirical formulæ are included and applied in designing. The text-book used is Unwin's *Elements of Machine Design*.

[Three hours a week for one term.]

## VII.

**Valve Gears**—This Course includes a complete study of the Zeuner diagram as applied to slide valves and the principal automatic cut-off engines. The radical gears, such as Hackworth, Walschaert, Marshall and Joy are treated in the same way and in conclusion the student is made familiar with the various types of Corliss valves, shifting eccentrics and link motions. The text-book is Spangler's *Valve Gears*.

[Two hours a week for one term.]

## VIII.

**Mechanical Laboratory**—The work taken up includes a study of the methods of testing the steam engine under varying running conditions, valve setting, calibration of thermometers, gauges and indicator springs, use of Prony brake, Weber and Emerson dynamometers, Pelton water wheel, Wier calibration, etc. Text-book, Carpenter's *Experimental Engineering*.

[One afternoon each week for one term.]

## IX.

**Thesis**—Each candidate for a degree in this department must present for graduation a thesis of considerable magnitude which will exhibit his knowledge of the course he has followed. It may embrace designing, experimental investigation or original research in a subject selected by the student and approved by the Professor. The major part of the second term, Senior Year, is devoted to the work and graduation is conditional upon the knowledge of Mechanical Engineering displayed in its preparation.

*[Twelve hours a week for one term.]*

## X.

## SHOPWORK.

(a) **Woodwork**—Exercises in planing, sawing, splicing, framing, scroll-sawing and turning.

*[Five hours a week for second term, Freshman Year.]*

(b) **Applications of Carpentry** to pattern-making, cores, etc., including parts of machines, pipe joints, cranks and bearings.

*[Four hours a week for one term.]*

(c) **Iron Forging**, welding, annealing, shaping, tool making, tempering and case hardening.

*[Four hours a week for one term.]*

(d) **Benchwork** in iron, including surface chipping, key-setting, draw-filing, scraping and polishing.

*[Five hours a week for one term.]*

(e) **Accurate Work** on lathe, planer, shaping and milling machines. Construction of machine tools, reamers, taps, twist-drills, gear wheels and complete machines.

*[Five hours a week for one term.]*

## COURSES IN ELECTRICAL ENGINEERING.



### I.

**Applied Electricity**—A course of lectures and recitations, supplemented by laboratory practice, on the general theory of electricity and magnetism and its application to practical work, as follows: Setting up and testing primary and secondary batteries, systems of call bells, electric gas lighting appliances, fire and burglar alarms, telegraph and telephone lines, switchboards and accessories.

Experiments with induction coils, magnets, switches, voltmeters, ammeters, wheatstone bridges, galvanometers and other measuring instruments. The study of direct current generators and motors, arc and incandescent lighting systems, street railway machinery and appliances, electric heating and forging, electrolytic processes, etc.

*[Five hours a week for two terms.]*

### II.

**Applied Electricity**—Lectures and laboratory work on the construction and testing of switches, magnets, measuring instruments, induction coils, etc. The calculation of sizes of wire and location of circuits for lighting and power, the experimental study of alternating current machinery and accessories.

If the student has acquired sufficient skill in handling tools in his shopwork he may design and build a small dynamo, starting with the rough castings, doing all the fitting and finishing, winding and adjusting, and finally testing for insulation, efficiency and adaptability to special purposes. This Course must be preceded by Course I. Both



I. and II. are required in the Short Course in Electrical Engineering; they are elective for general students and those studying telegraphy.

*[Five hours a week for two terms.]*

### III.

**Electricity and Magnetism**—The relations of currents to magnetism, magnetic units, permeability, hysteresis and other magnetic phenomena, solution of problems. Recitations and lectures. Text-book, Ewing's *Magnetic Induction*.

*[Two hours a week for two terms.]*

### IV.

**Dynamo-Electric Machinery**—Recitations on the physical theory of dynamo machines, armature actions and reactions, characteristic curves, mechanical points, theory of armature winding, the mathematical theory of alternating currents, phase relations, modern forms of single phase and multiphase generators and motors, design of transformers.

*[Five hours a week for two terms.]*

### V.

**Electrical Laboratory**—Practical work at wiring buildings for lights and power, testing circuits for insulation and grounds, construction and operation of storage batteries, management and care of dynamos, characteristic curves of particular machines under different conditions, efficiency tests of motors by absorption dynamometer methods, alternating current dynamo and transformer tests, the testing of storage batteries, and complete plant-efficiency tests. Careful notes are taken. This course is supplementary to Course IV. and both must be preceded by Course III.

*[Five credit hours a week for two terms.]*

## VI.

**Drawing**—The designing and making of working drawings of switches, resistances, and other electrical apparatus. Calculation of sizes of wire and location of circuits for lighting buildings. Complete drawings of direct and alternating current dynamos. Laying out plants for power and lighting.

*[Three credit hours a week for two terms.]*

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## COURSES IN ARCHITECTURE.



## I.

**History of Architecture**—Lectures on Egyptian, Greek, Roman, Byzantine, Gothic and Renaissance styles.

*[Three hours a week for two terms.]*

## II.

**Architectural Designing**—Drawing and rendering in pen and ink and water colors of the elements employed in Classical and Renaissance design. The principles of planning and composition. Monumental structures. Problems in design involving the use of the classic orders, the Gothic, and Renaissance style. Interior decorations.

*[Ten hours a week for two terms.]*

## III.

**Specifications and Contracts**—Lectures and practice in the preparation of specifications and contracts for architectural structures.

*[Two hours a week for one term]*

## IV.

**Photography**—Lectures on lenses, the camera, and the manipulation of dry plates. Practice in exposing, developing and printing. Copying, enlarging. Making of lantern slides.

[*Two hours a week for one term. Laboratory fee, \$10.*]

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For references to the drawing and mathematical courses see pages 69, 43, etc.

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## Courses in Artistic Drawing and Painting.



In this department the aim is to lay a thorough foundation in drawing and painting for those that wish to make art a profession, but the courses are so arranged as to be accessible to other students. The system of teaching which, is that followed in the best art schools, is intended to develop the individuality of each student, so that with a good understanding of the principles of art he may interpret nature according to his own temperament.

The work is done altogether from cast, object, and nature. The immediate surroundings of the University buildings, the lakes and the Saint Joseph River offer many beautiful subjects for the study of landscapes, and the classes are taken out in the summer for this study.

To the old collection of casts has been added a new one, which was carefully selected at the National School of Fine Arts in Paris, where all the casts are moulded directly from the originals. The collection is as follows:

**Full Figure**—The Diadumenos (British Museum); the Doryphoros (Naples). These two figures are full size.

The following figures are reduced mathematically: The Discobolus; the Venus of Milo; the Slave of Michelangelo; the Achilles; the Fighting Gladiator (Louvre), and Houdon's Anatomical Figure.

**Busts and Heads**—Asiaticus (Paris); Brutus (Rome, the Capitol); Cato (Rome, the Vatican); Cicero (Rome, the Capitol); Dante (Florence, Uffizi); Agrippa (Louvre); Venus (Vatican); A Centurion (Naples); Ariadne (the Capitol); Psyche of Naples (Naples); a Vestal (Vatican); Niobe (Vatican); the Two Daughters of Niobe (Florence).

Among the old busts are the Apollo Belvidere, the Antinous, Bacchus, Juno, Mercury, Demosthenes, etc.

Besides, there is a complete set of decorative and architectural ornaments, taken from monuments of antiquity, the middle ages and the Renaissance, and of elements of the human figure (hands, feet, etc.) from the antique, and some anatomical pieces.

## COURSE I.

### Elementary Class.

(a) Drawing from casts of ornaments purely geometrical, such as moldings, ovoloes, dentels, etc. Sketching from simple objects.

(b) Drawing from casts of ornaments of which the elements are living forms, such as ornamental leaves and flowers. Sketching from natural leaves and flowers.

(c) Drawing from architectural elements, such as pedestals, bases, shafts, cornices, etc. Lectures on perspective, direction of the principal lines in relation to the horizon. Elementary notions on the five orders of architecture.

(d) Drawing from casts of the human figure: hands, feet, masks, etc. Architectural ornaments. Sketching from familiar objects.

**COURSE II.****Antique Class.**

(a) Drawing from the antique of heads and busts. Still life drawing. Sketches of landscapes from nature. Selection of a subject. Composition in landscape. Applications of perspective.

(b) Drawing from the antique, full figure. Occasional studies of the head from the living model. Sketching from the costumed model. Still life in water colors. History of art.

**COURSE III.****Life Class.**

(a) Drawing from life. Artistic anatomy. Anatomical studies from the collections of Science Hall. Still life painting in water colors and oil. Landscape painting. Drawing for illustration.

(b) Painting from life. Portraiture. Historical composition.

**Sketch Class**—One hour a week. This class is open also to the students in the Mechanical Drawing classes. The students have themselves an organization, "The Crayon Club," the object of which is to sketch College scenes and to do illustrative work: these sketches are brought into class and criticised.

**Class of Decorative Design**—The object of this department is to prepare students for professional work in decorative designings of all kinds. They will take up the study of historical ornaments and will be taught the general principles of the arrangement of design, and from personal sketches of plants and flowers will be shown the art of making original designs for wall paper, book covers, stained glass, carpets, interior decorations, metal plates, etc. No particular programme is given out as the teaching is purely individual.

## COURSES IN MECHANICAL DRAWING.



The instruction begins with sketching from blocks, of various geometric forms, so that the hand and eye may be trained in Outline Drawing in pencil and pen. Then follows the study of light and shade.

After considerable practice, and when a thorough knowledge of freehand drawing has been acquired, the use of instruments is taken up. A large drawing hall for advanced students in the engineering courses is on the second floor of the Engineering Building. Beginning with the instruments, attention is given to accurate draughtmanship upon plates, illustrating problems in Civil, Electrical and Mechanical Engineering. This work is continued throughout the Courses.

### I.

**Freehand**—The work consists of sketching with pencil and pen from flat copies and models of machine parts and freehand lettering. Later in the term, the use of instruments, section-lining and lettering are taught. Text-book, Thorne's *Junior Course of Mechanical Drawing*.

[Two hours a week for one term.]

### II.

**Projection Drawing**—The work embraces the principles of projections, methods of shop-drawing, tinting, tracing, blue printing, line-shading and the preparation of working



drawings of complete machines. Text-books, Thorne's *Intermediate Mechanical Drawing*, and Low and Bevis' *Manual of Machine Drawing and Design*. This Course must be preceded by Course I.

[*Two hours a week for two terms.*]

### III.

**Descriptive Geometry**—A series of accurate plates are made, illustrating the principles of orthographic and spherical projections, shades and shadows, perspective and isometric projections. Text-book, *Hal*.

[*One hour a week for first term, and two hours a week for second term.*]

### IV.

**Kinematic Drawing**—Designing of cams and gear teeth, complete working drawings of machines involving the application of kinematics and the computation of dimensions. Reference-book, Low and Bevis' *Manual of Machine Drawing and Design*.

[*Two hours a week for two terms.*]

### V.

**Topography**—Pen and colored topographical drawing, conventional signs, map drawing from notes taken from surveys. This Course must be preceded by Course I.

[*Four hours a week for one term.*]

### VI.

**Masonry**—Drawing and designing plans, elevations and sections of masonry constructions, foundations, dams, piers, abutments, culverts and arches.

[*Four hours a week for one term.*]



## VII.

**Bridge Designing**—Proceeding from simple framed girders to complete bridge-trusses of various designs. . Complete design of a railroad bridge and detail drawings.

*[Four hours a week for two terms.]*

## VIII.

**Freehand**—The principles of freehand drawing in pencil and pen from objects, and later from biological specimens, plants, animals and microscopical preparations.

*[Two hours a week for two terms.]*

## IX.

**Freehand**—Advanced drawing from plants and anatomical dissections of animals. Illustrations for publications.

*[Two hours a week for two terms.]*

## COURSES IN CHEMISTRY.



### I.

(a) **General Descriptive Chemistry**—Lectures and Recitations. A complete study of the elements and their most important compounds, following the classification based on Mendeléeff's Law, and including a thorough discussion of the theories of the science. Careful attention is given to technical chemical processes and industries, and to the writing of chemical reactions.

*[Two hours a week for two terms.]*

(b) **Experimental Chemistry**—A Laboratory Course to accompany Course (a), the work consisting of the preparation, by the student, of the elements and their more typical compounds, determination of molecular weights, verification of the fundamental laws of chemistry, etc. During the latter part of the Course, special attention is given to the characteristic reactions of the metals and to the principles of chemical analysis.

*[Two laboratory hours a week, with discussion, for two terms.]*

### II.

**Qualitative Chemical Analysis**—The work of this Course comprises the study, in the laboratory, of the reactions involved in the separation and detection of the more common inorganic bases and acids, the analysis of salts, mixtures of salts, and complex substances such as earths, ores, ashes, etc. Text-book, *Appleton*, supplemented by lectures.

*[Five laboratory hours a week, with recitation, for one term.]*

## III.

**Quantitative Chemical Analysis**—A laboratory study of the principles involved in the quantitative separation and estimation of substances, both gravimetrically and volumetrically. Complete analysis of a number of simple salts like Baric chloride, with partial analysis of substance such as steel, lye, drinking-water, etc. Reference-book, *Fresenius*.  
[*Five laboratory hours a week, with recitation, for one term.*]

## IV.

**Organic Chemistry**—Lectures, recitations, and laboratory work. A systematic study of the compounds of Carbon, involving the preparation, by the student in the laboratory, of the more important and typical organic compounds and the investigation of their properties. Ultimate organic analysis. Text-book, *Remsen*.

[*Seven laboratory hours a week, with two lectures or recitations, for one term.*]

## V.

**Urinary Analysis and Toxicology**—A Course of laboratory exercises in the methods employed in the detection and estimation of the constituents of the urine, and of the alkaloids and principal organic poisons. Text-book, *Witthaus*.

[*Five hours a week for one term.*]

## VI.

**Technical Chemical Analysis**—An advanced course, intended for students of General Science specializing in

chemistry. Special courses in gas analysis, water analysis, sugar analysis, commercial organic analysis, etc., at the option of the student.

*[Five to fifteen laboratory hours a week for both terms.]*

## VII.

**Organic Chemistry**—Chiefly laboratory work. An advanced course, intended for General Science students specializing in chemistry.

*[Ten to fifteen laboratory hours a week for both terms]*

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## COURSES IN PHYSICS.



**Physics**—A complete Course of recitations and lectures, including mechanics, heat, sound, light, electricity, and magnetism. The work is fully illustrated by experiments.

*[Five hours a week for one term.]*

## II.

**General Physics**—In this course there is a more extended treatment of the same subjects than is given in Course I. Mathematical principles are applied to physical phenomena. Special attention is paid to accuracy in the mathematical work and in the statements of the principles involved. Lectures and recitations.

*[Three hours a week for two terms.]*

## III.

**Physical Laboratory**—Manipulation of apparatus. Length, mass and time measurements. Elementary work in density, elasticity, heat, light, and sound. The student is taught to depend on his own resources and to use the reference library. Careful notes are required of all experiments performed.

*[One hour a week for one term]*

## IV.

**Physical Laboratory**—Special advanced work in heat, light, mechanics, sound, electricity, and magnetism. Accuracy in observations and in the calculation and recording of results is required. Students may specialize here according to the college course which they are following. This Course must be preceded by Courses II. and III. For list of apparatus see page 14.

*[Three hours a week for two terms.]*

## COURSES IN BOTANY.



## I.

**Botany**—Lectures, recitations, and laboratory work. A study of the morphology of the root, stem, leaf, flower, fruit, and seed. The development of the embryo and the processes of pollination and fertilization. Microscopic study of the vegetable cell, of its products, of cell formation, and of plant tissues. Simple experiments demonstrating various physiological phenomena. The structure and reproduction of the Algæ, Fungi, Mosses and Ferns. The analysis of Phanerogams occupies the time during the spring months, and the student is made familiar with the local flora. Text-books, Bastin's *College Botany* and Gray's *Manual*.

[*Five hours a week for two terms.*]

## II.

**Botanical Laboratory** — Supplementary to Course I. Special work on the Thallophyta and Bryophyta. Plants under these headings are collected and put before the student that he may become more familiar with their morphology, structure, etc. This course is to accompany or be preceded by Course I.

[*Two hours a week for one term.*]

## III.

**Botany**—Lectures, recitation, and laboratory work. The work in this course is essentially the same as that laid out in Vine's text-book of Botany. Special work is required in one particular group of plants. Herbarium

study is encouraged as well as the collecting and preparing of plants for preservation. During the spring months frequent excursions are made into the neighboring fields and woods and the local aquatic and land flora are collected and studied.

[*Ten hours a week for two terms.*]

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## COURSES IN ZOOLOGY.



### I.

**Zoology**—Lectures and recitations. General ideas on the animal kingdom. Animals and plants defined. The homology and analogy between the organs and parts of animals. The morphology, classification, structure, development and relationship of the types of vertebrates and invertebrates. Text-book, *Nicholson*.

[*Five hours a week for one term.*]

### II.

**Laboratory**—Supplementary to Course I., chiefly invertebrate work, including a study of microscopic forms of the Protozoa and Cœlenterata. Work in Entomology, etc.

[*Two hours a week for one term.*]

### III.

**Invertebrate Zoology**—Lectures, recitations, and laboratory work. In this course there is a more extended treatment of Invertebrates. Dissection of the different types of the higher forms. Careful notes and drawings are made from these dissections. The use of the Reference Library. The student begins to do research-work in this course.



Opportunity is given to carry on systematic work on the different groups contained in the University Museum.

*[Six hours a week for one term.]*

#### IV.

**Comparative Vertebrate Anatomy**—Lectures and laboratory work. This course consists of a thorough study and classification of types of each of the five classes of vertebrates accompanied by dissections. Special attention is given to Osteology and comparisons are made between the bones of skeletons representing each order of the vertebrates. Opportunities are given for practical work in mounting the skeletons of different animals.

*[Five hours a week for one term.]*

#### V.

**Mammalian Anatomy**—This course has been provided for students preparing themselves for a medical course. The work consists of demonstrations and thorough dissections on the anatomy of the cat.

*[Five hours a week for one term.]*

#### VI.

**Comparative Embryology**—Lectures and laboratory work. A study of the developmental history of invertebrates, including a comparison of the germ-cell and sperm-cell in different types of animals. The maturation and fertilization of the ovum. Mitosis and segmentation. The development of the Ectoderm, Mesoderm, and Endoderm compared in the types of invertebrates, differentiation of tissues, development of the embryo, etc. Special work on the embryology of a vertebrate—Fish.

*[Three hours a week for one term.]*

## COURSES IN GENERAL BIOLOGY.



### I.

**Cytology**—Lectures and laboratory work. History of the cell, cell structure, organization, activity, and mitosis.

*[Two hours a week for one term.]*

### II.

**General Biology**—Lectures and laboratory work. The forms of animals and plants compared as to structure, function, and relationship of parts. Animal and plant dissection. Biogenesis and Abiogenesis, Homogenesis and Heterogenesis. The alternation of generation in different forms of animals and plants worked out. The theories of evolution are discussed in this course. Text-book, *Parker*.

*[Five hours a week for one term.]*



## COURSES IN PHARMACY.



### I.

**Elements of Pharmacy**—Lectures, recitations and demonstrations, on the "Art and Science of Pharmacy," embracing its history, review of the important Pharmacopœias, Dispensatories, and Formularies; their value compared and discussed. A course follows for the remainder of the year, on the principles and the various processes governing the

practice of Pharmacy. Text-book, Coblenz's *Handbook of Pharmacy*.

[*Four hours a week for one year.*]

## II.

**Galenical Pharmacy**—A Laboratory Course to accompany Course I. This includes the practical application of Pharmaceutical processes to the manufacture of official preparations of the U. S. Pharmacopœa. Text-book, *U. S. Pharmacopœa*.

[*Five hours a week, the first year.*]

## III.

**General Pharmaceutical Chemistry**—In this course, the Chemical bases and their compounds are considered, with special reference to their importance in Pharmacy and Materia Medica. Text-book, Sadtlers' and Trimbles *Pharmaceutical Chemistry*.

[*Three hours a week, the second year.*]

## IV.

**Laboratory of Inorganic Pharmacy**—In the second year there is a thorough course in the preparation of Pharmaceutical and Technical Chemicals. This course is supplemented by a series of lectures on the selected methods. Text-book, Oldberg's *Manual of Inorganic Preparations*.

[*Three hours a week, for six months.*]

## V.

**General Pharmacy**—A systematic classification of organic and inorganic drugs, from the pharmaceutical stand-point, followed by a close study of each of the classes. Text-book, Coblenz's, *Handbook of Pharmacy*.

[*Two hours a week for two terms.*]

## VI.

**Magistral Pharmacy**—Includes the manifold methods of Dispensing Pharmacy, with special consideration of incompatibility, posology, and the principles of Elegant Pharmacy. Text-book, Scovilles' *The Art of Dispensing*.

[*Two hours a week for two terms.*]

## VII.

(1) **Materia Medica, Pharmacognosy and Therapeutics**—A detailed consideration of medicinal substances; their origin and composition.

(2) **Therapeutics**—The action of each drug will be considered according to its grouping.

(3) **Pharmacognosy**—Includes the identification of each drug according to its physical properties, with special reference to its quality. Text-books: (1) Sayres' *Materia Medica*. (2) Professor's Notes on *Therapeutics*. (3) Rusby and Jeilifee's *Essentials of Pharmacognosy*.

[*Two hours a week for two years.*]

## VIII.

**Pharmaceutical Analysis**—Includes Pharmaceutical Assaying, Pharmacopœial Limitations, Alkaloidal Analysis, Bacteriological, Micro-chemical, Polariscopic and Spectroscopic Estimations, Technical Analysis of Compounds used in the arts, Toxicology, Urinalysis, Food Analysis and Forensic Pharmacy. Text-books, Muler's *Analytical Chemistry*, Stanislaus, *Scheme in Uranalysis*.

## COURSES IN MICROSCOPY.



### I.

**Microscopy**—Lectures and laboratory work. Refraction and dispersion of light and illumination. The index of refraction in different media. Different shapes of lenses. Spherical and chromatic aberration. The selection and care of a good microscope. The use of accessories for advanced work: immersion and adjustable objectives, camera lucida, sub-stage condenser, polarizer, micrometers, etc. Special work in photo-micrography.

*[Three hours a week for one term.]*

### II.

**Micro-Chemistry**—Laboratory work. The preparation of micro-chemical reagents and their application in testing, fixing, hardening, staining, clearing, and mounting tissues and organs.

*[One hour a week for one term.]*

## COURSES IN HUMAN ANATOMY.



### I.

**Human Histology**—Laboratory work and demonstrations. Introductory work on the manipulation of the microscope. Prepared tissues of the organs of the human body given to each student, and their structure demonstrated.

*[Two hours a week for one term.]*

### II.

**Human Histology**—Lectures, recitations and laboratory work. Methods of hardening, staining, embedding, section cutting and mounting of animal tissues. Careful work on the nervous system—brain and spinal cord, termination of nerve fibres, etc. Drawings made from each preparation. Text-book, *Schäfer*.

*[Three hours a week for one term.]*

### III.

**Human Anatomy**—Lectures and recitations. Osteology and descriptive anatomy of the muscular, digestive, circulatory and nervous systems.

*[Two hours a week for four terms.]*

## COURSES IN HUMAN PHYSIOLOGY.



### I.

**Physiology**—Lectures, recitations and demonstrations with the stereopticon. The study of the human skeleton including the physiology and hygiene of the bones. The action, relation, structure and hygiene of muscles. The digestive, circulatory and excretory systems demonstrated by models and charts. The anatomy and structure of the nervous system and simple experiments on the same. Text-book, *Martin*.

*[Five hours a week for one term.]*

### II.

**Physiology**—Lectures, recitations and experimental work. A more extended treatment of Course I. on alimentation, deglutition, stomach and intestinal digestion, action of bile and pancreatic juice, absorption, properties of lymph and chyle, secretion, excretion, animal heat and its sources. The physiological divisions and structure of the nervous system. Motor and sensory nerves. Physiological anatomy of the spinal cord. General arrangement and function of the sympathetic system, etc.

*[Two hours a week for two terms.]*

### III.

**Hygiene**—Lectures on personal, domestic and municipal hygiene.

*[One hour a week for one term.]*



## COURSE IN BACTERIOLOGY.



### I.

**Lectures and Laboratory Work**—Lectures on the form, classification, structure and reproduction of bacteria. The relations of bacteria to disease, etc. The principles of sterilization are pointed out. Isolation and identification of pathogenic germs form a large part of the work. Emphasis given to the detection of pathogenic germs by the various staining processes. The early part of the laboratory work is occupied in the preparation of the various culture-media and the growth of certain non-pathogenic forms on these media. Inoculations of animals with pathogenic germs and effects observed. Text-book, *Abbott*.

[*Three hours a week for one term.*]

## COURSES IN GEOLOGY.



### I.

**Mineralogy**—Lectures, recitations, and laboratory work. A study of crystallography and the classification of minerals, accompanied by practice in the laboratory and museum in the determination of minerals, especially the ores. Blow-pipe analysis. *Collins.*

*[Two hours a week for one term.]*

### II.

**Assaying**—Chiefly laboratory work. Furnace assaying of the ores of gold, silver and lead. *Ricketts.*

*[Two laboratory hours a week for one term.]*

### III.

**Geology**—Lectures and recitations. The study of the general features of the earth. The material composing the accessible parts of the earth. The arrangement of the material in rocks. The causes of geological changes. The history of the earth and the various forms of life that existed in the different periods of successive geological ages. Text-book, *Dana.*

*[Five hours a week for one term.]*

## COURSES IN MUSIC.



## FIRST YEAR.

## I.

**Violin**—Studies by Wichtl, Ries, Mazas, Kreutzer, Fiorillo. Compositions by Dancla, DeBeriot, Sitt.

## II.

**Pianoforte**—Kœhler's and Damm's *Piano School*. Studies by Lœschorn, Berens, Czerny, Heller. Sonatinas and easy sonatas by Clementi, Haydn, Reinecke and Mozart. *Jugend-album* and *Kinderscenen* by Schumann.

## III.

**Voice-Production**—Tone-placing. Diaphragmatic breath-control. Articulation. Text-books: Shakespeare's *Art of Singing, Part I.*; Kofler's *Art of Breathing*; *Studies* by Bassini; English Songs.

**Vocal Sight Reading**—Elementary theory of Music. Intervals, and Ear-Training. Choir Practice.

## IV.

**Organ**—Rink's *Organ School*. Eugene Thayer's *Studies, Light Preludes and Fugues* by Bach.

## SECOND YEAR.

## Ia.

**Violin**—Studies by Rode, Schradieck, Dont. Sonatas and pieces by Tartini, Bach, Beethoven and Mozart.

## IIa.

**Pianoforte**—Studies by Czerny, Heller, Hasert, Lecouppy,

Cramer and Krause. Octave Studies by Turner. Bach's Preludes, Fugues and Inventions. Sonatas and Pieces by Mozart, Haydn, Beethoven, Mendelssohn, Schumann and Schubert.

### IIIa.

**Voice-Production**—Advanced Breathing Exercises. Study of the Chest and Falsetto registers. Stroke of the Glottis. Text-Books: Shakespeare's *Art of Singing Parts II. and III.*; Studies from Italian Operas; French and English Songs.

**Vocal Sight Reading**—Phrasing, punctuation and advanced study. Practice in Operatic Chorus-work.

### IVa.

**Organ**—Schneider-Warren's *Pedal Studies*. Easy sonatas by Mendelssohn, Merkel, Rheinberger. Preludes and Fugues by Bach. *Twenty Studies* by Whiting. *Canonic Studies* by Chadwick.

### V.

**Harmony**—Construction and use of chords. Harmonization of melodies. Harmonizing from figured bass. Text-books: Gœtschius' *Tone Relations*, Logier's *Harmony*.

## THIRD YEAR.

### Ib.

**Violin**—Sonatas by Bach. Studies by Schradieck-Alard, Wieniawski. Concertos and pieces by Spohr, Vieuxtemps, Mendelssohn, Dvorak.

### IIb.

**Pianoforte**—*Gradus ad Parnassum*, Clementi-Tausig. *Wohl Temperirte Klavier* by Bach. English and French Suites by Bach. *Etudes* by Haberbier and Henselt.

Sonatas, concertos and pieces by Beethoven, Weber, Mendelssohn, Chopin, Schubert and Grieg.

### IIIb.

**Voice-Production**—Study of the Trill, Mordent, Gruppetto, etc. *Messa di Voce*.

### IVb.

**Organ**—Sonatas, Preludes and *Chorale Vorspiele* by Bach. Concert Pieces by Hændel, Merkel, Salome, Whiting, Best, Rheinberger.

### Va.

**Harmony**—(Counterpoint.) Simple two and four part counterpoint; double and florid counterpoint. Canon. Fugue.

## FOURTH YEAR.

### Ic.

**Violin**—Studies by Paganini. Concertos and pieces by Beethoven, Brahms, Bruch, Joachim and others.

### IIc.

**Pianoforte**—Studies by Tausig and Chopin. Sonatas, concertos, and concert pieces by Schumann, Brahms, Rubinstein, Liszt.

### IIIc.

**Organ**—The greater Preludes, Fantasies and Fugues of Bach. Sonatas and concert pieces by Thiele, Widor, Dubois, Guilment and Saint-Saëns.

### IVb.

**Harmony** — (Composition). Construction of musical forms, i. e., the Sonata, Rondo, etc. Practical application in an original manner of these forms. Orchestration.

Instruction is also given on the Viola, Flute, Piccolo, Cornet, Trombone, Guitar and Mandolin.

Opportunity is given to the advanced students of playing in the University Orchestra and Band.

### THE SINGING CLASS.

There is an organization of musical students open to those only taking lessons in vocal music; the choir is selected from the members of this class.



## REQUIREMENTS FOR THE DEGREE OF BACHELOR OF MUSIC.



1. The candidate must have studied music in the University during the last year of his course.
2. He must have a thorough theoretic knowledge of four instruments mentioned in the courses described above, and a practical mastery of one of them.
3. He must pass a written examination in Harmony, Counterpoint and Composition.
4. He must submit to the examiner two original compositions: (a) a fugue for full orchestra, or for four voices with independent orchestral accompaniment; (b) a composition in the free form (sonata or rondo) for pianoforte, or a trio (pianoforte, violin and violincello).

## EVIDENCES OF CHRISTIANITY.



All Catholic Students are obliged to attend the Courses in Evidences of Christianity.

The text-book used in the Junior and Senior years is *Hand-Book of the Christian Religion*, by Wilmers.

A two-year course in Deharbe's *Middle Catechism* precedes the course above.

In the Preparatory School Bible History and the Baltimore Catechism are used.



## REGULATIONS GOVERNING ADMISSION TO THE COLLEGIATE COURSES.



Examinations in all the subjects required for admission to the University are held at Notre Dame in September, at the beginning of the Fall term.

Certificates of work done in public or private schools will not be accepted instead of examinations, unless the applicant has passed the final examination after a full course in his school, and the University Faculty are satisfied with the standing of the school.

*Diploma students of High Schools that are fully accredited to the State Universities, will be admitted without examination at the Freshman year of any course to which their preparatory studies entitle them.*

Applicants for advanced standing that present certificates from other colleges or universities may be received at the discretion of the Faculty with or without examination as regards particular cases.

No student will be received as a candidate for the degree of Bachelor after the beginning of the Senior year unless he passes an examination in the Metaphysics and Ethics already studied by the Senior class of the University.

*No student will be admitted to any course of the Senior year until all conditions have been cancelled.*

Catholic Students that are candidates for any degree are required to take the prescribed Courses in Evidences of Religion.

**CONDITIONAL ADMISSION TO FRESHMAN CLASSES.**

A candidate failing to pass satisfactory examinations in one or more of the subjects required for admission to any Collegiate Course may, at the discretion of the Faculty, be admitted to his class conditionally, to make up his deficiency by extra study *within one school year*. Only when the conditions are removed will the student be admitted to full standing in his class.

**ADMISSION TO ADVANCED STANDING.**

Candidates for admission to advanced classes in any course are required to pass, *in addition* to the usual entrance examinations, an examination in the work already done by the classes they desire to enter. The additional subjects may be found in the programme of courses.



I. School of Arts and Letters.

II. School of Science.

III. School of Engineering.

IV. School of Law.

## SCHOOL OF ARTS AND LETTERS.



## PRIMARY ENTRANCE EXAMINATION.

**English**—Part of the examination time is given for answering questions upon books marked *Group A* below, the remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

**Latin**—Grammar, complete; Cæsar: four books of the Gallic War; Cicero: four orations against Catiline; Virgil: *Bucolics*, *Georgics*; or Ovid: about 1,200 verses; translation at sight of passages from Cicero and Cæsar; translation of English into Latin based on the text of the author.

**Greek**—(*For Classical Students only.*) Grammar, Etymology, and general rules of Syntax; Xenophon: *Anabasis*, four books; prose composition based on text.

**History**—(a) United States—as set out in Johnson's *History of the United States*, or an equivalent.

(b) A general knowledge of the outlines of Greek and Roman History and of Mediæval and Modern History, as set out in the texts used in the high schools and academies of the country.

**Algebra**—The whole subject as far as logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises of other authors.

**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**Physiology**—Martin's *Human Body*, or an equivalent.

**Chemistry**—Elements of inorganic chemistry, as given in high schools of good standing.

**Physics**—Elementary. The preparation on this subject should include a course of lectures, illustrated by experiments, and recitations from a text-book similar to *Carhart and Chute's* or *Gage's*. Laboratory work is desired, but it is not required.

**Graduation Thesis**—A graduation thesis is required from each student in the classical and English Courses. This thesis is to be handed in before May.

**French and German**—A years study of either German or French is required for entrance to the course in English and the course in History and Economics. Students that present French will continue French during the Freshman year and begin German: in this case German will be continued during the Sophomore year. A like regulation holds for those that present German at the entrance examination—French will be continued during the Sophomore year.

The entrance examination requires sight translation of ordinary German or French prose: an ability to translate, rather than accurate grammatical knowledge, is expected.

## Studies Prescribed in the Classical Course.

(DEGREE: A. B.)

### FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Latin, . . .	5	37	I.	Latin, . . .	5	37	II.
Greek, . . .	5	33	I.	Greek, . . .	5	33	II.
English, . . .	4	40	I.	English, . . .	4	40	I.
History, . . .	3	44	I.	History, . . .	3	44	I.
Elocution, . . .	2	44	VIII.	Elocution, . . .	2	44	VIII.
Elective, . . .	5			Elective, . . .	5		

### SOPHOMORE YEAR.

Latin, . . .	5	37	III.	Latin, . . .	5	38	IV.
Greek, . . .	5	33	III.	Greek, . . .	5	34	IV.
English, . . .	4	40	II.	English, . . .	4	40	II.
History, . . .	3	44	II.	History, . . .	3	44	II.
Elocution, . . .	2	44	VIII.	Elocution, . . .	2	44	VIII.
Elective, . . .	5			Philosophy, . . .	5	29	I.

### JUNIOR YEAR.

Latin, . . .	5	38	V.	Latin, . . .	5	38	VI.
Greek, . . .	5	34	V.	Greek, . . .	5	34	VI.
English, . . .	4	41	III.	English, . . .	4	41	III.
Philosophy, . . .	5	29	II.	Philosophy, . . .	5	29	II.
Elocution, . . .	2	44	VIII.	Elocution, . . .	2	44	VIII.
Economics, . . .		46	I.	Elective, . . .	5		
	4						

### SENIOR YEAR.

Latin, . . .	5	39	VII.	Latin, . . .	5	39	VIII.
Greek, . . .	5	35	VII.	Greek, . . .	5	36	VIII.
English, . . .	4	41	IV.	English, . . .	4	41	IV.
Philosophy, . . .	7	30	III.	Philosophy, . . .	7	30	IV.
Elocution, . . .	2	44	VIII.	Elocution, . . .	2	44	VIII.



## Studies Prescribed in the English Course.

(DEGREE: Litt. B.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
English, . .	4	40	I.	English, . .	4	40	I.
Latin, . . .	5	37	I.	Latin, . . .	5	37	II.
French or . .	5	47	I.	French or . .	5	47	I.
German, . . .		49	I.	German, . . .		49	I.
History, . . .	3	44	I.	History, . . .	3	44	I.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.
Elective, . .	5			Elective, . . .	5		

## SOPHOMORE YEAR.

English, . . .	4	40	II.	English, . . .	4	40	II.
Latin, . . . .	5	37	III.	Latin, . . . .	5	38	IV.
French, . . . .	2	48	II.	French, . . . .	2	48	II.
German, . . . .	3	49	II.	German, . . . .	3	49	II.
History, . . . .	3	44	II.	History, . . . .	3	44	II.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.
Elective, . . .	5			Philosophy, . .	5	29	I.

## JUNIOR YEAR.

English, . . .	4	41	III.	English, . . .	4	41	III.
Latin, . . . .	5	38	V.	Latin, . . . .	5	38	VI.
Philosophy, . .	5	29	II.	Philosophy, . .	5	29	II.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.
History, . . . .	4	45	III.	History, . . . .	4	45	III.
Elective, . . .	5			Elective, . . .	5		

## SENIOR YEAR.

English, . . .	4	41	IV.	English, . . .	4	41	IV.
Latin, . . . .	4	39	VII.	Latin, . . . .	4	39	VIII.
Philosophy, . .	7	30	III.	Philosophy, . .	7	30	IV.
Economics, . .	4	46	I.	History, . . . .	5	45	IV.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.

# Course in History and Economics.

(DEGREE PH. B.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
History, . .	4	44	I.	History, . .	4	44	I.
English, . .	4	40	I.	English, . .	4	40	I.
French or . .	5	47	I.	French or . .	5	47	I.
German, . .	5	49	I.	German, . .	5	49	I.
Spanish, . .	3	48		Spanish, . .	3	48	
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.

## SOPHOMORE YEAR.

History, . .	4	44	II. a IV. a	History, . .	4	44	II. a IV. a
Political Sci'ce,	4	46	I.	Political Sci'ce,	3	46	II.
English, . .	4	40	II.	Philosophy, . .	5	29	I.
German, . .	3	49	II.	English, . .	4	40	II.
French, . .	2	48	II.	German, . .	3	49	II.
				French, . .	2	48	II.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.
Elective, . .	3			Elective, . .	3		

## JUNIOR YEAR.

History, . .	7	45	II. b III.	History, . .	7	45	II. b III.
Political Sci'ce,	3	46	II.	Political Sci'ce,	3	46	III.
Philosophy, .	5	29	II.	Philosophy, .	5	29	II.
English, . .	4	41	III.	English, . .	4	41	III.
Elective, . .	2			Elective, . .	2		
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.

## SENIOR YEAR.

History, . .	3	45	IV. b	History, . .	3	45	IV. b
Political Sci'ce,	7	46	IV. v.	Political Sci'ce,	6	46	VI. VII.
Philosophy, .	5	30	VII.	Philosophy, .	5	30	VIII.
English, . .	4	41	III.	English, . .	4	41	IV.
Elocution, . .	2	44	VIII.	Elocution, . .	2	44	VIII.

## COURSE IN JOURNALISM.

(DEGREE: Master of Letters in Journalism.)



This is strictly a post-graduate course and is open only to those who have completed the Course in History and Economics described on page 98. The purely academic training afforded by that Course is here supplemented by a year's practical experience in newspaper work under the immediate supervision of an experienced journalist. Abundant opportunity for practice is offered by the newspapers of Chicago (all of which have regular correspondents at the University) and of other large cities. In addition to the routine work of this Course, each student is expected to contribute to special departments in newspapers and magazines, and diplomas will not be issued to those who have failed to find a market for at least some of their work. The classes in this Course are:

**Journalism**—Lectures and recitations on the history of journalism. Critical comparative study of home and foreign newspapers. The law of newspaper libel. Copyright and postal regulations. Daily exercises in reporting, and frequent exercises in editorial writing; department work; musical and dramatic criticism and book reviews. Editing copy, proof-reading and "making-up" a newspaper. Lectures on topics of current interest, and exercises in the treatment of them. Required readings in Dana's *Art of Newspaper Making*, Shuman's *Steps into Journalism*, Hudson's *History of Journalism*, Luse's *Writing for the Press*, any good treatise on the law of libel and slander, and the biographies of famous journalists. Discussion of the business side of newspaper work, advertising, circulation, etc.

**Theology**—Wilhelm and Scannell's *Manual of Dogmatic Theology*.

**Phonography and Typewriting**—Ordinary Course,  
**Political History of the 19th Century.**

## SCHOOL OF SCIENCE.



Two courses are given, one a course in General Science, the other a course in Biology.

### REQUIREMENTS FOR ADMISSION.

Candidates for the Freshman class of either of these courses must be prepared to pass an examination in Arithmetic, included in English examinations, and Geography, unless satisfactory assurance of their proficiency in these branches is given. In addition, they must pass an examination in the following subjects:

**History**—(a) United States,

(b) General outlines. See page 98.

**Algebra**—The whole subject as far as logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises of other authors.

**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**Chemistry**—A course of at least fifty experiments in elementary chemistry actually performed by the pupil.

**French or German**—Ability to translate at sight easy French or German into English, and easy English sentences into French or German. In the courses in Biology and General Science French and German are required.

**English**—Part of the examination time is given for answering questions upon books marked *Group A*, the

remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

**Latin**—Grammar, complete; Cæsar: four books of the Gallic War; translation of English into Latin based on the text of this author.

## Introduction to the Course in General Science.



The Course in General Science is calculated to afford such an acquaintance with the methods and facts of modern science as will best enable the student to fit himself, either for further study of a technical or professional kind, or for the activities of business life. The Natural and Physical Sciences constitute the primary studies of this Course. Grouped about these are those studies in English, Mathematics, and the Modern Languages, which experience has shown to be necessary for the intelligent pursuit of science and for the attainment of the object of the Course.

Two essays on scientific topics are required of every student during the Sophomore Year and two during the Junior Year.

The scientific work of the Senior Year is elective. Advanced courses may be chosen in Physics, Chemistry, Biology, or Mathematics.

Every candidate for a degree in the Course of General Science is required to submit, at least six weeks before the final examinations, a written thesis upon some subject connected with the elective work of the Senior Year. The subject chosen must have the approval of the Professor in the course elected. The Thesis shall contain not less than six thousand words, and must be satisfactory in matter and treatment.

Students that complete the required courses, pass the final examinations, and present a satisfactory thesis will receive the degree of Bachelor of Science.

(The facilities for instruction in this Course are described on page 16.)  
For Laboratory Fees, see page 114.



## Studies Prescribed in the Course in General Science.

(DEGREE: B. S.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Physiology, . .	5	86	I.	Zoology, . .	6	79	I. II.
Physics, . .	5	76	I.	Chemistry, . .	4	74	I.
Chemistry, . .	4	74	I.	Trigonometry, . .	5	50	II.
Anatomy, . .	2	85	I.	English, . .	5	40	I.
Algebra, . .	5	50	I.	French or Ger., . .	2	47-49	I.
English, . .	5	40	I.	Drawing, . .	2	71	II.
French or Ger., . .	2	47-49	I.				
Drawing, . .	2	71	I.				

## SOPHOMORE YEAR.

Botany, . . .	5	78	I.	Botany, . . .	6	78	I. II.
Chemistry, . .	5	74	II.	Physics, . .	4	76	II. III.
French or Ger., . .	2	47-49	II.	Anal. Geometry, . .	5	51	III.
Physics, . .	3	76	II.	French or Ger., . .	2	47-49	II.
English, . .	1	42	V.	Drawing, . .	2	71	II.
Elective, . .	3			English, . .	1	42	V.
Drawing, . .	2	71	II.	Elective, . .	3		

## JUNIOR YEAR.

Geology, . .	2	88	I.	Geology, . .	7	88	II. III.
Calculus, . .	5	51	IV.	Calculus, . .	5	52	V.
Astronomy, . .	3	60	I.	Astronomy, . .	3	60	I.
English, . .	1	42	V.	Philosophy, . .	5	29	I.
Two Electives, . .	5			English, . .	1	42	V.
				One Elective, . .	3		

## SENIOR YEAR.

Three Electives in Science, . .	9-15			Three Electives in Science, . .	9-15		
Philosophy, . .	5.	29	II.	Philosophy, . .	5	29	II.
French or Ger., . .				French or Ger., . .			
Scientific Readings, . .	1			Scientific Readings, . .	1		



## Introduction to the Course in Biology.



The Course in Biology has been designed for students that wish to devote their time largely to biological pursuits, either as an immediate preparation for the study of medicine or veterinary science, or with a view to teaching or otherwise engaging in biological research. The students in this Course are required to prepare an essay during the first term of the Junior Year on some subject pertaining to biology. Every candidate for a degree must submit a written thesis accompanied with original drawings. This thesis must be presented two weeks before the final examinations. Students not preparing themselves for a medical course may substitute for the advanced Courses in Anatomy and Physiology equivalents from either Mathematics, Physics, or English Literature.

### LABORATORY FEES.

Biological Laboratory— <i>Biology II.</i> —2nd session, . . . . .	\$5.00.
Biological Laboratory— <i>Zoology II.</i> —2nd session, . . . . .	2.50.
Use of Apparatus in Biological Laboratory, . . . . .	5.00.
Botanical Laboratory— <i>II.</i> —2nd session, . . . . .	5.00.
Use of Apparatus in Botanical Laboratory, . . . . .	5.00.
Bacteriological Laboratory— <i>I.</i> —1st session, . . . . .	10.00.
Use of Apparatus in Mineralogical Laboratory, . . . . .	5.00.

(The facilities for instruction in this Course are described on page 16.)

## Studies Prescribed in the Course in Biology.

(DEGREE: B. S.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Physiology, . .	5	86	I.	Zoology, . .	6	79	I. II.
Physics, . .	5	76	I.	Chemistry, . .	4	74	I.
Chemistry, . .	4	74	I.	English, . .	5	40	I.
Anatomy, . .	2	85	I.	French or Ger.,	2	47-49	I.
English, . .	5	40	I.	Drawing, . .	2	73	VIII.
French or Ger.,	2	47-49	I.				
Drawing, . .	2	73	VIII.				

## SOPHOMORE YEAR.

Botany, . . .	5	78	I.	Botany, . . .	6	78	I. II.
Gen'l Biology,	2	81	I.	Gen'l Biology,	5	81	II.
Microscopy, .	3	84	I.	Microscopy, .	1	84	II.
Chemistry, . .	5	74	II.	Chemistry, . .	7	75	IV.
French or Ger.,	2	48-49	II.	French or Ger.,	2	48-49	II.
Drawing, . .	2	73	IX.	Drawing, . .	2	72	IX.
English, . .	1	42	V.	English, . .	1	42	V.

## JUNIOR YEAR.

Human				Human			
Anatomy, . .	2	85	III.	Anatomy, . .	2	85	III.
Zoology, . .	6	79	III.	Zoology, . .	10	80	IV. V.
Bacteriology, .	3	87	I.	Chemistry, . .	5	75	III.
Geology, . .	2	88	I.	Geology, . .	5	88	III.
English, . .	1	42	V.	Philosophy, . .	5	29	I.
				English, . .	1	42	V.

## SENIOR YEAR.

Human				Human			
Anatomy, . .	5.	85	II. III.	Anatomy, . .	2	85	III.
Human				Human			
Physiology, .	4	86	II. III.	Physiology, .	3	86	II.
Botany, . .	10	78	III.	Botany, . . .	10	78	III.
Philosophy, .	5	29	II.	Zoology, . .	3	80	IV.
				Philosophy, .	5	29	II.

## SCHOOL OF PHARMACY.



There are two courses in Pharmacy: one of two years, leading to the degree, *Graduate in Pharmacy* (*Ph. G.*); and another of three years, leading to the degree, *Pharmaceutical Chemist* (*Phar. C.*) The courses in the first two years of the three-year courses are the same as those required for the degree, *G. Phar.*

### ADMISSION.

Candidates for admission to these courses must be at least 17 years of age.

The requirement for admission are the same as those prescribed on pages 104 and 105, with the exception that French and German are excluded.

Experience in a drug-store will not be accepted instead of the entrance examinations, but it will be of great advantage to the students in the work of this Course

### METHODS AND EQUIPMENT.

The subjects studied in this department are intended to impart a thorough theoretical as well as a practical knowledge of Pharmacy, the work commencing with the simplest and gradually leading up to the most difficult and complicated processes.

Especial attention is given to the little details, often neglected in schools, which are so essential to success in any professional work and particularly in Pharmacy. The student is carefully drilled in store etiquette, business hints, prescription work, and dispensing. Neatness and order in all the operations and extreme care in the manufacture of preparations are required throughout the Course.

On entering the laboratory the student is assigned to a

desk fully equipped with all the necessary apparatus. He has at hand balances, percolators, mortars, graduated glasses, hydrometers, thermometers, pill machines, Liebig condensers, stills, a large assortment of porcelain, platinum and glass utensils, sand and steam baths and other minor articles that are included in a complete laboratory outfit.

### THESIS.

During the last year the student is required to spend at least two hours a week in original research on a subject within the domain of Pharmacy. The results of this work are carefully recorded and must be typewritten and presented to the faculty as a requirement for graduation.

### LABORATORY FEES.

In addition to the regular tuition - fee covering cost of board, room, etc., the student is required to pay:

Pharmaceutical Laboratory II....	\$20.00.
Pharmaceutical Laboratory II. and IV.....	20.00.
Pharmaceutical Laboratory VII. and VIII.....	40.00.

## COURSES IN PHARMACY.

(DEGREES: Ph. G., Ph. C.)

## FIRST YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Materia Medica,	2	83	VII. I	Materia Medica,	2	83	VII. I
Pharmacy, . .	4	81	I.	Pharmacy, . .	4	81	I. II.
Chemistry, . .	2	74	I.a	Chemistry, . .	2	74	I.b
Botany, . .	5	78	I.	Botany, . .	5	78	I.
English, . .	5	40	I.	English, . .	5	40	I.
				Physics, . .	5	76	I.

## SECOND YEAR.

Pharmacy, . .	6	82	II. III. V.	Pharmacy, . .	6	82	II. IV. VI.
Chemistry, . .	5	74	II.	Chemistry, . .	5	75	III.
Materia Medica,	5	83	VII.	Materia Medica,	5	83	VII.2
Pharmacognosy	2	83	VII.3	Physiology, . .	5	86	I.

## THIRD YEAR.

Pharmacy, . .	5	82	VI.	Pharmacy, . .	5	82	VIII.
Chemistry, . .	7	75	IV.	Therapeutics,	2	83	VII.2
Bacteriology, .	3	87	I.	Toxicology, . .	5	75	V.
Mineralogy, . .	2	88	I.	Mineralogy, . .	2	88	II.
Thesis, . .							

Apply for a detailed catalogue of the Pharmacy College.

## SCHOOL OF ENGINEERING.



Three regular courses are offered: one leading to the degree of Civil Engineer, one to the degree of Mechanical Engineer, and another to the degree of Mechanical Engineer in Electrical Engineering.

A special Short Course in Electrical Engineering is offered to accommodate those that wish to fit themselves for practical work in the shortest possible time.

A student should not take up any one of these courses unless he has a natural aptitude for mathematics. A liking for machinery and tools is of great advantage in Mechanical or Electrical Engineering.

Special attention is given to the practical work of Engineering in the laboratories and draughting rooms. The exercises in calculating, designing and constructing are made to conform as nearly as possible to the best modern engineering practice.

The various laboratories are equipped with the most approved forms of instruments and appliances and considerable time is given to technical work in the laboratories.

(For a list of available apparatus, see pages 14-15.)



In the schedule of studies one hour credit is given for each recitation or lecture which requires from one to two hours' preparation. Two hours actual time in laboratory work or drawing are required for each hour on the schedule.

## EXPENSES.

In addition to the regular fees for matriculation, board, tuition, lodging, etc., as given on page 26, the regular students in the three Engineering Courses are required to pay laboratory fees to cover, in part, the cost of materials consumed and the deterioration of the apparatus used, as follows:

## LABORATORY FEES.

Physical Laboratory III.....	\$ 5.00
Physical Laboratory IV.....	15 00
Electrical Laboratory I., II.....	15.00
Electrical Laboratory V.....	20.00
Shopwork, all four-hour courses per term.....	15.00
Chemistry I., II., III., IV., VI., VII., each.....	10.00
Chemistry V.....	5.00

## ADMISSION.

Candidates for admission to the Freshman Year must be at least 17 years of age. For advanced standing there must be a corresponding increase in the age limit.

## ENTRANCE EXAMINATIONS.

Written examinations in the following subjects required for admission will be held at the University on the first two days of the fall term at the beginning of the school year:

**Arithmetic**—Complete, including the metric system of weights and measures. Special importance is attached to accuracy in calculations and the practical application to rules.

**Algebra**—Fundamental operations, simple equations, involution and evolution, radicals, radical equations and quadratic equations, including everything up to logarithms, as given in Wentworth's *College Algebra*, Jones' *Drill Book in Algebra*, or an equivalent in the larger treatises by other authors.



**Geometry**—Plane and Solid, including the solution of simple original problems and numerical examples, as given in the works of *Wentworth*, *Chauvenet*, *Newcomb*, or an equivalent in treatises by other authors.

**History**—(a) United States.

(b) General outlines. See page 98.

**Geography**—Political and Physical, as much as is contained in the larger school geographies.

**Physics**—Elementary. The preparation on this subject should include a course of lectures, illustrated by experiments, and recitations from a text-book similar to *Carhart and Chut's* or *Gage's*. Laboratory work is desirable but it is not required.

**Chemistry**—The elements of inorganic chemistry, as given in good high schools.

**Botany**—(*For Civil Engineering only.*) As given in elementary text-books.

**Physiology and Hygiene**—(*For Civil Engineering only.*) As given in elementary text-books.

**French and German**—*Only one language is required.*) A knowledge of elementary grammar and an ability to read ordinary prose at sight. This should be acquired by the reading of about three hundred pages of annotated text, including historical narrative and popular science in connection with the study of grammar.

**English**—Part of the examination time is given for answering questions upon books marked *Group A*, the remainder for writing three short essays (about 250 words each) upon subjects taken from the books marked *Group B*. The books prescribed until further notice are:

*Group A*—Milton's *Paradise Lost*, Books I. and II.; Tennyson's *Princess*; Scott's *Lady of the Lake*; Longfellow's *Evangeline*.

*Group B*—Longfellow's *Tales of a Wayside Inn*; Milton's *L'Allegro*, *Il Penseroso*, and *Lycidas*.

Equivalent authors will be received at the discretion of the Examiners.

If the applicant passes these examinations satisfactorily he may begin at once the regular Freshman work; but if he is deficient in one or more subjects he may enter conditionally and make up his deficiency as soon as possible in the Preparatory Department.

Those that are prepared to pass the entrance examination in German will take both French and German in the Freshman Year and French only in the Sophomore Year, while if French is presented at the entrance examination both languages will be studied in the Freshman Year and German only in the Sophomore Year. The intention in either case is to give a reading knowledge of technical works.

## Introduction to the Course in Civil Engineering.



The Courses of instruction are designed to prepare students by a thorough and systematic training in the sciences and in the principles of Civil Engineering, to perform intelligently the duties of their profession either in the office or in some of the responsible positions superintending the construction and operation of public works. To secure these results the student is given, not only a sound theoretical training in the studies of the Courses, but he is also required to study the practical applications of the principles upon which the theory is based. The first two years are devoted to the study of Mathematics and the theoretical branches. The last two years are given to the study of the applied courses, practical work in the laboratory and field, so much as possible, being required throughout the course.

Sufficient instruction is given in French and German to enable the student to read easily and understandingly professional works in these languages; while the study of English is pursued until the student is qualified to prepare acceptable themes on professional subjects. Instruction based upon standard text-books is given throughout the course by means of lectures, recitations, practice in laboratory, drawing room, and field. This work is largely supplemented by assigning to the student, for solution, practical problems bearing directly upon the subject matter discussed in the class room and requiring original investigation, thus training the student to habits of independence and awakening his interest in the work of his course.

The Department is provided with all the instruments necessary for effective work in the different branches of field

Engineering. After the student is taught the use and adjustments of the instruments, surveys, elementary in character, are commenced and continued progressively until the more difficult principles and methods are understood. In a similar manner is instruction given in the Courses, Sanitary Engineering, Hydromechanics, Resistance of Materials, Bridges and Roofs, etc., thus familiarizing the student with practical Engineering subjects, and the most approved methods of execution and designing.

A Thesis on some approved subject connected with the course of study, is required of each student as a condition of graduation. The Thesis must embody the results of original research.

## Studies Prescribed for Civil Engineering.

(DEGREE: C. E.)

### FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	50	I.	Analytic Geom.	5	51	III.
Trigonometry,	5	50	II.	Surveying, .	5	53	II. III.
English, . .	5	40	I.	English, . .	5	40	I.
French or Ger.,	2	47-49	I.	French or Ger.,	2	47-49	II.
Chemistry, . .	3	74	I.	Chemistry, .	3	74	I.
Drawing, . .	3	71	I.	Drawing, . .	3	71	I.

### SOPHOMORE YEAR.

Calculus, . .	5	51	IV.	Calculus, . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
R.R. Surveying	4	54	VI. VII.	Adv. Surveying,	4	54	IV. V.
English, . .	1	42	V.	English, . .	1	42	V.
Physics, . .	3	76	II.	Physics, . .	3	76	II.
Drawing, . .	4	71	II. III.	Drawing, . .	4	72	III. V.
French or Ger.,	2	48-49	III.	French or Ger.,	2	48-49	III.

### JUNIOR YEAR.

Analytic Mechanics,	5	55	VIII.	Mechanics of Materials, .	5	55	IX.
Astronomy,	3	60	I.	Astronomy, .	3	60	I.
Geodesy, . .	4	59	XVIII.	English, . .	1	42	V.
English, . .	1	42	V.	Geology, . .	4	88	III.
Geology, . .	4	86	I.	Stereotomy, .	2	58	XIV.
Drawing, . .	4	72	V.	Drawing, . .	2	72	VI.

### SENIOR YEAR.

Engineering,	5.	57	XIV.	Engineering,	5	57	XII.
Drawing, . .	4	72	VI.	Hydromechan.,	3	58	XIII.
Bridges, Roofs,	3	56	X.	Graph. Stat.,	5	56	XI.
Sanitary Eng.,	2	57	XIII.	Steam Boilers,	3	62	IV.
Hydromechan.,	3	58	XIII.	Thesis Work,			

## Introduction to the Course in Mechanical Engineering.



The Course in Mechanical Engineering, leading to the degree of Mechanical Engineer, is given to those young men that wish to prepare themselves for the designing of machinery, with its appurtenances, and for the successful management of power-plants. As the course requires a thorough knowledge of Pure and Applied Mathematics, as well as of Physics, only those capable of adapting themselves to these requirements should take it up. The course is modeled in the twofold belief that a thorough fundamental training is essential to success in engineering, and that this training is best secured by a study of the practical application of the principles involved, as well as of the theoretical principles.

The work of the department, conducted in connection with other departments elsewhere described, consists of the study, by text-book or lectures, of the materials used in Mechanical Engineering, accompanied by the science of pure mechanical kinematics, which traces the motions of connected parts without reference to the cause of such motions or to the work done or energy transmitted. This is succeeded by machine design, which is a direct development of kinematics, and the course continues throughout the Junior and Senior Years.

The Courses in Shopwork are most complete. The first years' work is confined to practice in the woodshop, in which the principles of carpentry, turning, and pattern-making are taught. When students have become sufficiently

skilled in woodwork, they take up the work of the foundry, blacksmith shop, and machine shop. During the ensuing year the advanced students will undertake the construction, from an original design, of a rotary steam engine. A systematic course of training is provided, which advances the student by easy steps until he has mastered all the details of the art.

The latter part of the Senior Year is largely taken up in the preparation of a Graduating Thesis. Here especially the student is taught to depend as much as possible upon his own resources and abilities in exercising his ingenuity. It is the culminating effort of the Course, embodying the chief results, and is expected to show considerable originality.

(For the equipment of the shops in which the courses are given, see  
Page 18.)



# Studies Prescribed for Mechanical Engineering.

(DEGREE: M. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra . .	5	50	I.	Analyt. Geom.,	5	51	III.
Trigonometry,	5	50	II.	English, . .	5	40	I.
English, . .	5	40	I.	French . . .	2	47	I.
French . . .	2	47	I.	German, . . .	3	49	II.
German, . .	3	49	II.	Drawing, . .	3	71	II.
Drawing, . .	3	71	I.	Chemistry, .	2	74	I. b
Chemistry, .	3	74	I. a	Shopwork, . .	5	64	X. a

## SOPHOMORE YEAR.

Calculus, . .	5	51	IV.	Calculus, . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
Drawing . .	2	71	II.	Drawing, . .	3	71	II.
English, . .	1	42	V.	English, . .	1	42	V.
French, . . .	2	48	II.	French, . . .	2	48	II.
Chemistry, .	5	74	II.	Chemistry, .	5	75	III.
Physics, . .	3	76	II.	Physics, . .	4	76	II. III.
Shopwork, .	4	64	X. b.	Shopwork, . .	4	64	X. c.

## JUNIOR YEAR.

Analytical				Mech's of Eng.	5	55	IX.
Mechanics,	5	55	VIII.	Machine design	3	63	VI.
Kinematics, .	5	62	V.	Valve Gears,	2	63	VII.
English, . .	1	42	V.	Electrical Eng.	2	64	III.
Drawing, . .	3	72	IV.	English, . .	1	42	V.
Physics, . .	3	77	IV.	Drawing, . .	3	72	IV.
Shopwork, .	5	64	X. d	Shopwork, . .	5	64	X. e.

## SENIOR YEAR.

Materials of				Thermodynam,	5	61	I.
Engineering,	5	61	II.	Steam Engine			
Thermodynam,	5	61	I.	Design, . .	5	62	III.
Steam Engine				Steam Boilers,	3	63	IV.
Design, . .	5	62	III.	Thesis, . . .	12	64	IX.
Mechani'l Lab.	3	63	VIII.				
Shopwork, .	5	64	X. e				

## Introduction to the Course in Electrical Engineering.



The remarkable development of electrical industries during the past few years has created a demand for men skilled in the theory and practice of Electrical and Mechanical work. The study of the subjects arranged on the following page is intended to give a general education as well as special training in the technical branches involved in the various practical applications of electricity in industrial pursuits.

General theory is given in lectures and by recitations from standard text-books. In the laboratories and shops the operations explained in the class room are performed by the student, in which he acquires some skill in handling tools and instruments, and obtains a working knowledge of the principles involved. Careful records of the work done in the laboratories are kept by the student and are handed in for suggestions and corrections at the end of every week.

(For requirements of admission, degree, etc., see pages 102-103.)

### THESIS.

Each candidate for a degree is required to prepare during the Senior Year an acceptable Thesis embodying the results of an extended original research on an Engineering subject, chosen at the beginning of the year, with the approval of the head of the department. The descriptive part must be typewritten and the drawings carefully made on white cardboard.

# Studies Prescribed for Electrical Engineering.

(DEGREE: B. S. in E. E.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra . .	5	50	I.	Analyt. Geom.,	5	51	III.
Trigonometry,	5	50	II.	English, . .	5	40	I.
English, . .	5	40	I.	French . . .	2	47	I.
French . . .	2	47	I.	German, . . .	3	49	II.
German, . . .	3	49	II.	Drawing, . . .	3	71	II.
Drawing, . .	3	71	I.	Chemistry, . .	2	74	I. b
Chemistry, . .	3	74	I. a	Shopwork, . .	5	64	X. a

## SOPHOMORE YEAR.

Calculus, . .	5	51	IV.	Calculus, . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
Drawing . .	2	71	II.	Drawing, . .	3	71	II.
English, . .	1	42	V.	English, . .	1	42	V.
French, or Ger.,	2	48-49		French, or Ger.,	2	48-49	
Chemistry, . .	5	74	II.	Electricity and			
Physics, . .	3	76	II.	Magnetism,	2	66	III.
Shopwork, . .	4	64	X. b.	Physics, . .	4	76	II. III.
				Shopwork, . .	4	64	X. c.

## JUNIOR YEAR.

Analytical				Mech's of Mat.	5	55	IX.
Mechanics,	5	55	VIII.	Machine design	3	63	VI. VII.
Kinematics, .	5	62	V.	English, . .	1	42	V.
English, . .	1	42	V.	Drawing, . .	3	72	IV.
Drawing, . .	3	72	IV.	Physics, . .	3	77	IV.
Physics, . .	3	77	IV.	Shopwork, . .	5	64	X. e.
Shopwork, . .	5	64	X. d.				

## SENIOR YEAR.

Dynamo				Dynamo			
Machinery,	5	66	IV.	Machinery,	5	66	IV.
Thermodynam.	5	61	I.	Thermodynam.	5	61	I.
Electrical Lab.,	5	66	V.	Electrical Lab.,	5	66	V.
Drawing, . .	3	67	VI.	Drawing, . .	3	67	VI.
Thesis, . . .				Thesis, . . .			

## Short Course in Applied Electricity.



Students that do not wish to take the languages and higher mathematics required in the regular four-year course should enter this shorter course, which may be completed in two years. It is arranged to give an accurate knowledge of the fundamental theories of electricity and magnetism, as well as a certain amount of skill in handling electrical machinery and appliances. Simple algebra, geometry, trigonometry, and elementary physics and chemistry are included, for they are necessary in order to carry on successfully the practical work of designing, manufacturing, and testing or operating electrical apparatus. Training in this practical work is given in the draughting room, the machine shops, and in the electrical and physical laboratories.

The actual conditions of the commercial application of electricity to the distribution of light and power are learned by testing, repairing, and making additions to the University plant and by visiting the numerous electric plants in the vicinity, accompanied by an instructor.

The study of the principles of mechanical drawing is taken up early in the course and sufficient practice is given to enable the student to make working drawings and to follow them in the construction of apparatus in the shops and laboratories.

Applicants for admission to this Course should be at least seventeen years of age. They should have a fair knowledge of the subjects taught in the common schools, especially arithmetic.

When the required studies have been satisfactorily completed, a certificate stating that fact is issued.

## Studies Prescribed for Short Course in Applied Electricity.

### FIRST YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . .	5	162	*	Algebra, . .	5	162	†
Drawing, . .	3	71	I.	Geometry, . .	5	163	‖
Shopwork, . .	3	64	X. a	Drawing, . .	4	71	II.
Physics, . .	3	76	I.	Shopwork, . .	5	64	X. b
Chemistry, . .	2	163	†	Physics, . .	2	76	I.
Electricity, . .	5	65	I.	Electricity, . .	5	65	I.

### SECOND YEAR.

Trigonometry,	5	50	II.	Analytic			
Drawing, . .	3	72	VI.	Geometry,	5	51	III.
Shopwork, . .	3	64	X. c	Drawing, . .	3	72	VI.
Electricity, . .	5	65	II.	Shopwork, . .	3	64	X. d
Electrical				Electricity, . .	5	65	II.
Construction,	5	65	II.	Electrical			
				Construction,	5	65	II.

\* Second term, second year.

† First term, third year.

‡ First term, third year.

‖ First term, third year.

## COURSE IN ARCHITECTURE.



### ADMISSION.

Candidates for admission to the Freshman Year must be at least 17 years of age. For advanced standing there must be a corresponding increase in the age limit.

### DESCRIPTION OF THE COURSE.

Those subjects that are not taught in the architect's office but which are necessary for an architect are especially insisted upon in this course.

The work is technical and freehand drawing is thorough, and the student is prepared for the expression of his architectural plans.

In construction and practice the courses prescribed for the students in the civil and mechanical engineering schools are followed with special application to architectural requirements. The æsthetic part of the work thus has a practical and exact basis.

The history of architecture is taught by lecture and illustrations.

The material equipment consists of plaster models, engravings and photographs of noted buildings, books on architecture, and the apparatus of the engineering and art schools.

## COURSE IN ARCHITECTURE.

(DEGREE: Bachelor of Science in Architecture.)

## FRESHMAN YEAR.

SUBJECTS: FIRST TERM.	Hours a Week	SEE FOR DESCRIPTION:		SUBJECTS: SECOND TERM.	Hours a Week	SEE FOR DESCRIPTION:	
		Page	Course			Page	Course
Algebra, . . .	5	50	I.	Analytic Geom.	5	51	III.
Trigonometry,	5	50	II.	English, . . .	5	40	I.
English, . . .	5	40	I.	French or Ger.,	2	47-49	
French or Ger.,	2	47-49		Mech. Drawing,	2	71	II.
Mech. Drawing,	2	71	I.	Artistic Draw'g,	5	69	I. c I. d
Artistic Draw'g,	5	69	I. a I. b	Chemistry, . .	2	74	I. b
Chemistry, . .	3	74	I. a	Shopwork, . .	5	64	X. a

## SOPHOMORE YEAR.

Calculus, . . .	5	51	IV.	Calculus, . . .	5	52	V.
Des. Geometry,	3	53	I.	Des. Geometry,	3	53	I.
Mech. Drawing,	3	71	II. III.	Mech. Drawing,	4	71	II. III.
Artistic Draw'g,	5	70	II. a	Artistic Draw'g,	5	70	II. a
English, . . .	1	42	V.	English, . . .	1	42	V.
French or Ger.,	2	47-49		French or Ger.,	2	47-49	
Physics, . . .	3	76	II.	Physics, . . .	4	76	II. III.
Shopwork, . .	4	64	X. b	Shopwork, . .	4	64	X. c
Ap. Electricity,	3	65	I.				

## JUNIOR YEAR.

Analytic Mech.	5	55	VIII.	Mech. of Mat'ls	5	55	IX.
English, . . .	1	42	V.	English, . . .	1	42	V.
Geology, . . .	4	88	I.	Geology, . . .	5	88	III.
Mech. Draw'g,*	4	72	VI.	Mech. Draw'g,*	4	73	VII.
Artistic Draw'g,	5	70	II. b	Artistic Draw'g,	5	70	II. b
Roof Trusses,	3	56	X.	Roof Trusses,	3	56	X.

## SENIOR YEAR.

Arch't Design,†	10	67	II.	Arch'l Design †	10	67	II.
Contracts, . .	1	144	I.	Photography,	2	68	IV.
Specifications,	1	67	III.	Stereotomy, .	2	58	XV.
Hist. of Arch'e,	3	67	I.	Hist. of Arch'e,	3	67	I.
Surveying, . .	5	53	II. III.	Vent. & Heat'g	1	57	XIII.
Foundations,	1	57	XII.	Graph. Statics,	3	56	XI.
Thesis Work,				Thesis Work,			

\* Pen-and-ink and Water-color rendering are applied in this work.

† In this course is included work done in Course III., page 70.



School of Law.

## FACULTY.



REV. ANDREW MORRISSEY, C. S. C.,  
President of the University.

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WILLIAM HOYNES, LL. D., DEAN,  
International Law, Equity Jurisprudence and Pleadings,  
Common Law Pleadings, Real and Personal Property,  
Evidence, Domestic Relations, Criminal Law,  
Corporations, Constitutional Law, Con-  
tracts, Torts, etc.

HON. LUCIUS HUBBARD, LL. D.,  
Code Pleadings and Practice.

HON. TIMOTHY E. HOWARD, LL. D.,  
Appellate Jurisdiction of Courts of Last Resort.

ARTHUR L. HUBBARD, A. B., LL. B.,  
Damages and Study of Cases.

HON. ORVILLE T. CHAMBERLAIN,  
Commercial Paper.

## SCHOOL OF LAW.



For several years a systematic movement has been in progress under the auspices of the bench and bar of the country to elevate the standing and promote the efficiency of the legal profession, and make it as learned in fact as it is in name. The most essential preliminary step to this end, as lawyers generally agree, is to prescribe requirements and examinations more comprehensive and rigorous as a test of qualifications for

### ADMISSION TO THE BAR.

Upon the law departments of universities, or law schools, as they may collectively be called, the profession must mainly depend for co-operation and success in this laudable undertaking. In fact, due acknowledgment of the importance of their services is made as follows in a former report of the Committee on Legal Education of the American Bar Association :

"The benefits which law schools offer are easily suggested, and are of the most superior kind. They afford the student an acquaintance with general principles, difficult if not impossible to be otherwise obtained; they serve to remove difficulties which are inherent in scientific and technical phraseology, and as a necessary consequence they furnish the student with the means for clear conception and accurate and precise expression. They familiarize him with leading cases, and the application of them to discussion. They give him the valuable habit of attention, teach him familiar maxims, and offer him the priceless opportunities which result from contact and generous emulation. They lead him readily to survey the law as a science, and imbue him with the principles of ethics as its true foundation. Disputing, reasoning, reading, and discoursing, become his constant exercises; he improves remarkably as he becomes acquainted with them, and obtains progress otherwise beyond his reach."

According to the late Chief Justice Waite, of the United States Supreme Court, "Law schools are now a necessity." And, in his work entitled "The American Commonwealth," Professor Bryce attributes the progress in learning and professional attainments of American lawyers "to the extraordinary excellence of many of the law schools."

It is probably well that the Professor qualifies his statement by using the word "many," instead of "all," in referring to the work of the law schools of the country; for some of them, regrettable to state, appear to be deficient in wholesome zeal to co-operate in elevating the standing of professional learning and ethics. They seem not to discriminate. At any rate, they permit persons wanting even in the rudiments of a liberal education to become candidates for diplomas. Their attitude in this respect would seem to indicate that a large attendance and substantial revenue are placed paramount in the scale of importance to substantial results in the equipment and training of students. Such of these young men as manage without further preparation to secure admission to the bar almost necessarily commit gross mistakes in the technical work of the profession, and, in consequence, clients are wronged, judges embarrassed and courts delayed. While it is true that many of them abandon the practice after a precarious experience and turn to pursuits for which they are better qualified, yet the step is attended in some measure with disappointment and humiliation, not to mention the comparative loss of time and means incident to preparing for examination and waiting vainly for success.

The movement in progress to protect and promote the interests of the legal profession has spread sufficiently of late to become an obstacle to the continuance of these abuses, exceptional though they be. Hereafter such law schools as receive students indiscriminately, without particular regard

to their educational standing, maintaining a loose system of instruction and permitting loose methods of study, with possibly a promise of graduation in one or two years, must in most States, at any rate, suffer the humiliation incident to the rejection as incompetent of their graduates by the examining boards designated to pass upon the qualifications of applicants for admission to the bar. This movement is salutary in all respects, and law schools that fail to conform to it in the duration and thoroughness of their courses of instruction have no valid claim upon the approval of the profession, the patronage of students or the confidence of the public.

It is becoming more difficult year by year successfully to meet the requirements and pass the examinations prescribed for admission to the bar, and law schools are bound to take cognizance of the fact and correspondingly broaden and strengthen their courses of instruction. A few years ago it was far less difficult than it is at present to enter the ranks of the profession, and the decided tendency is to make even more exacting the test of qualifications for membership. With this tendency uninterrupted, the profession gives promise of attaining to its coveted ideal in learning, ethics and efficiency.

And here it may be in order to refer more particularly to

### THE SYSTEM OF INSTRUCTION

in the Law Department of the University of Notre Dame, although, of course, it is included in general terms in what has been stated regarding the duty of law schools to aid in promoting the laudable aims and general welfare of the legal profession.

Referring briefly to the prevailing methods of instruction in the different law schools, it may be stated that in some of them the text-book system is exclusively followed, and the

students read and recite daily an assigned lesson of a given number of pages; in others the lecture system obtains, as in European universities, and students familiar with phonography may take notes and sufficiently study the same to be able in subsequent examinations to answer questions bearing upon the subjects studied; in a few others the study of cases, or case reading, is the favored system, and students read books of selected cases treating of different branches of the law, with a view to reciting them in outline or writing a brief digest of the points involved; in certain other schools an effort has been made to combine some of the distinctive features of case reading, text-book work and lecturing, and a mixed or eclectic system, as it may be called, exists in them. At Notre Dame, however, none of these systems is exclusively followed, although there is a nearer approach to the last than to any of the others. With careful discrimination, the best features of all are comprised in the curriculum here preferred. It is believed, in short, that nowhere in the country is the law course more comprehensive, thorough and practical than at this University.

The study of cases is usually taken up early in September year by year, and continued long enough to enable students to understand, analyze and criticize the decisions assigned to them for study and recitation. The difficulties usually encountered by beginners in the work are readily surmounted by the aid of lectures and explanations. In a comparatively short time students become familiar with a number of the leading cases and learn to recognize features of strength or weakness in the opinions of the courts. They learn also to distinguish dicta from the logical sequence of thought in dealing with the proper subjects of judicial determination, and recognize promptly the qualifying or weakening effect of a dissenting opinion, where such is filed by a minority of the judges. Moreover, after thus familiar-



izing themselves with cases, they are advised and expected to read the authorities cited daily in class, whether in the text-books, lectures, or quizzes. In the preparation also of written theses from mouth to mouth, comprising on an average ten or twelve pages of legal cap, they must necessarily consult and cite them. In moot-court work likewise they are prompted and emulously incited in their foretaste of forensic contests to make a careful study not only of the cases in the reports, but also of the pertinent portions of text-books, digests, etc., and thus they are enabled intelligently to marshal the authorities upon which they depend for success in the maintenance of their respective contentions.

In examinations for admission to the bar the courts of some States require applicants to furnish lists of the text-books they studied, and such of these applicants as have merely attended lectures or studied cases, instead of reading text-books, encounter danger of being declared ineligible to stand as candidates for examination, even though they might creditably acquit themselves in it. If they undertake to explain how the law may be learned without studying a certain number of text-books, they find the examiners inclined to listen incredulously, if not openly and positively to express doubt. And if they ask credit for the work done, it is likely to be given so sparingly as to cause disappointment and discouragement. As some of the law students at Notre Dame come from States in which this test is applied in examinations, the use of text-books is deemed advisable, if not necessary. But there are other reasons for using them. It has been found, for example, that so many mistakes are made by the average student in committing lectures to writing that his notes are sometimes unintelligible or misleading, and consequently practically worthless for future reference.



While it is true that this objection might be overcome by resorting to the slow, if not tedious, process of dictation, yet this method of instruction would manifestly be impracticable under present conditions in a domain so extensive as the law. Moreover, the books used by students become peculiarly available in their subsequent practice. Remembering more or less clearly the contents, they can turn more readily than they could with books they had not studied to the pages that elucidate the questions with which they may afterwards have to deal at the instance of courts, clients and opposing counsel. In some law schools lectures have been taken in full by certain students skilled in pronography, and then typewritten and sold at so much a page to other members of the class, but this practice has fallen into disfavor and disuse, having proved to be very unsatisfactory and more costly than the purchase of text-books.

The lecture or dictation system alone may be pronounced antiquated and impracticable for the reasons already stated, but in combination with text-book work, case reading and daily examinations, its great value and practical utility cannot be overestimated. At Notre Dame it forms an important factor in the law curriculum. Each subject is fully covered by lectures, text-book work, daily and bi-monthly examinations, monthly theses, the reading of pertinent cases and formal trials in the moot and other courts of the University.

This course of instruction is comprehensive, thorough, and practical. It cannot be excelled. It may be stated without qualification or reserve that the earnest and industrious student can accomplish twice as much in a given time at Notre Dame as he can in an office or at home. With comparative immunity from the distractions and temptations of city life, he can give his entire time to study and necessary recreation. In short, he can here study a

greater number of hours and do more class-work day by day than probably anywhere else in the entire country.

The authorities of the University, it may be repeated, are sincerely in sympathy with the efforts now making in educational and legal circles to raise to the highest plane practicable

### THE STANDARD OF PROFICIENCY

for graduation in law and admission to the bar. However, they aim to be guided in the matter by the dictates of common sense. They know that a great number of worthy and capable young men who desire to qualify themselves for the legal profession are prevented by circumstances from completing the studies of a collegiate course before an age that seems to make imperative the obligation of beginning without delay the study of law. Such young men, many of whom may be actively engaged in business, in teaching, in journalistic work, and the like, are almost necessarily driven to the chaotic and discouraging study of the law in offices, if denied indulgent consideration by the institutions of higher learning.

It is conceived to be the duty of a university to do all the good it can to as many as possible, consistently with its curriculum and standing; and to that end it ought to aid and encourage, to the full limit of its opportunities, worthy and upright, honest and capable young men who manifest an earnest desire to qualify themselves for a useful and creditable career in the higher walks of professional life. With a view to doing its full share in this regard, the University of Notre Dame will welcome to its halls and its classes every deserving young man who desires to pursue and become proficient in the study of the law. However, if his standing in collegiate work or general education be not sufficiently advanced to enable him to undertake with profit the studies

of the Junior year in law, he may enter the Elementary class, the members of which are given instruction in the fundamental principles of the law for an hour each day. The remainder of his time is devoted to study and recitation in such of the collegiate courses as, in the opinion of the authorities, may prove most useful and helpful in qualifying him to enter as speedily as practicable upon the studies of the Junior and Senior law classes.

A faithful discharge of the duties devolving upon the students of these classes demands their entire time. Every hour of the day can be devoted profitably to the work assigned to them. Even the Postgraduate students, whose time is devoted exclusively to law work, find it sufficient to keep them very busy. And yet it seems that, in an indulgent spirit, an exception ought to be made in the interest of such students as by previous study in other law schools, or law offices, or actual practice as attorneys, have acquired the right to be credited with work acceptably done, or advanced standing in the course. It is deemed only fair and proper to allow such as these to take electively any additional studies they may choose in the regular or special courses of the University. But this option may not be exercised without permission and reasonable assurance that it will not interfere with the work prescribed for students of the Law Department.

The rule requiring regularity in class attendance is imperative. Once students enter a class they are expected to remain in it for the session at least, faithfully performing the duties it imposes upon them. They may thus, by coming to Notre Dame to complete their legal studies, materially add to their attainments in any other branches of knowledge likely to be helpful to them in their practice as lawyers.

This fact tends pertinently to illustrate the special advan-

tages to be derived from studying law at a university. There the educational atmosphere is elevating, broadening, invigorating. It awakens a wholesome spirit of emulation. It encourages the exercise of all the faculties and intellectual powers. It serves as a potent and salutary force in the development of mind and body. The impressive lesson it inculcates relative to the past, the present and the future—the manifold duties of life—necessarily directs the thoughtful to paths of knowledge and usefulness. It awakens life-directing forces that else would perhaps ever lie dormant. It tends to turn thought and action toward high ideals, the acquisition of useful knowledge, sturdy self-reliance and a strong sense of moral obligation in the consciousness of increasing power and influence at the bar.

Students who do not intend to become candidates for the degree of LL. B., but wish simply to add to their educational acquirements a knowledge of the

### FUNDAMENTAL PRINCIPLES OF THE LAW

may at any time during the year have their names enrolled on the list of students in the Elementary class. No extra expense is thereby incurred. However, such students must be sufficiently advanced in age and education to justify the belief that they can understand and appreciate instruction in the law.

The number of such students is likely to increase steadily, for year by year it is becoming more manifest that an education is not complete without a knowledge of at least the elementary principles of the law. Many a man in trade has had to face financial ruin on account of want of acquaintance with the fundamental legal principles. Although in theory, at least, every person is presumed to know the law, yet many a man has, by an inconsiderate act, due to his ignorance of it, forfeited claim to the protection of the courts and the

vindication of his rights. Many a person has been forced to do exactly the contrary of what he intended through his failure to understand the essential elements of a contract. Many a one has been compelled to pay heavy damages for personal injuries caused by negligence, or failure to perform a duty, or improper performance of it, where no liability would exist if the law of torts had been known and observed. As the law is over and around every creature from the first moment of his being until the grave closes upon him and his estate is settled, it would be impossible to overestimate its vital interest and importance. Indeed, there is no study that can at all compare with it in practical utility, in training the mind to accuracy of observation, in strengthening the judgment and in imparting to the faculties the power of discernment implied in what may be called common sense.

A period of three years is prescribed for under-graduates in the

### COURSE OF STUDY

in the Law Department of this University. It leads when satisfactorily completed to the degree of LL. B. The Post-graduate course comprises an additional or fourth year, and leads to the degree of LL. M. By its charter this University is empowered to confer these and all other degrees appertaining to the courses of study in educational institutions of the highest rank. There is no university that has greater power under the law in this respect.

The under-graduate law students are divided into three classes, corresponding to each year of the course leading to the degree of LL. B. They are known respectively as the Elementary, Junior and Senior classes. The Postgraduate course is for students who have received that degree and aim at attaining by further study and practical work to a



higher order of proficiency. A full year of study in each class is obligatory. Moreover, the student must pass a satisfactory general examination at the close of each scholastic year. This test is indispensable as a condition of promotion in the Elementary and Junior classes and as evidence of qualifications for graduation in the Senior class.

The subjects of study and the work to be done in each class are here briefly outlined :

### ELEMENTARY CLASS—FIRST YEAR.

An hour daily is given to instruction, recitation and work in the class-room during the first year. The class-room, commodious and well appointed, is in the main building. The regular course of instruction consists in text-book work, lectures, quizzes, written exercises and attendance at moot-court trials and society meetings. The books primarily used are *Blackstone's* and *Kent's Commentaries*. Other works of elementary law are also used, as occasion may require. Such are chosen as seem best adapted and most available for purposes of instruction. Of these mention may be made of *Walker's American Law*, *Smith's Elementary Law*, *Munson's Elementary Practice*, *Keener's Selections on Jurisprudence*, *Holland's Elements of Jurisprudence*, *Robinson's Elements of American Jurisprudence*, *Fishback's Manual of Elementary Law*, and the like. The recently published edition of *Blackstone's Commentaries* by Dr. William Draper Lewis, is justly regarded as the best and most complete known to the profession, although the chart feature of *Blickenderfer's Abridgment of Blackstone* is much appreciated by students. *Browne's Blackstone*, too, is a carefully prepared summary in one volume of the essential elements of the original work. *Browne's Edition of Kent's Commentaries* is also a useful summary in one volume of the original treatise. However, it is usually

safer for students to purchase their books after joining the class. Uniformity is thus assured, as well as lowest current prices. This suggestion applies not only to the Elementary students, but also to the Juniors and Seniors.

Persons who desire to become members of the Elementary class must be at least eighteen years of age and entitled to collegiate standing in their general education. However, ample opportunity is afforded them to pursue such additional studies as may seem useful in preparing for a successful career in the law. For example, a knowledge of Latin, Logic, History, Political Economy, and the like, would be helpful to them. Other subjects also, in which they may either regard themselves as deficient or wish to excel, may likewise be entered on their lists of studies. Should it be deemed necessary or advisable for them to perfect themselves in these studies, whether one year or several years be requisite, it would be entirely practicable meanwhile to attend the exercises of the Elementary class. Work thus done would necessarily serve to broaden and deepen the foundation of subsequent work in the Junior and Senior years, making it peculiarly effective and promising. The work done in this class is exceptionally interesting and instructive for beginners, and there is sufficient change in it annually to sustain interest and make attendance profitable, though continued for two or more years.

### JUNIOR CLASS—SECOND YEAR.

When a student enters this class his close attention, and earnest thought, and best efforts must be directed exclusively to the study of law. He must attend class exercises at least three hours daily. This he must do for the entire scholastic year. Otherwise he cannot be regarded as entitled to promotion to the Senior class. He must do the



full work of the year if he would advance with his class and share its honors.

If the student be a collegiate Postgraduate in the Classics, Sciences, Letters, or the like, or has attained to equivalent acquirements and standing by work and experience in professional pursuits, or lines of thought and study kindred to the law, he may be eligible primarily to membership in this class. In such case it would be necessary for him to undertake and perform the most essential work of the Elementary class in addition to his other duties. The practicability of the undertaking may be inferred from the fact that it is sought to do in this class fully the work of a year and a half, as gauged by the courses of other educational institutions. That this has been done in many instances cannot be doubted, although there has never been special reference to any other institution, with a view to comparison, or as an incentive to exceptional effort. Presumably the result is due to a progressive system of instruction, more recitations daily, a greater number of hours for study and the purpose of each member of the Faculty to do his best in the performance of duty. But, notwithstanding these facts, it is necessary for many of the students, no matter how well advanced or finished their education, to take the full course of three years. The fact that they might accomplish in two years all that is ordinarily done in three, makes no difference. This is due to the action of courts and legislatures in many of the States. A rule has been established requiring three years of actual study of the law as a prerequisite to applying for admission to the bar. Persons from these States must take the full three years' course, including the Elementary class. However, if their general education be finished, and it seem superfluous to do further collegiate work, they may select in preference the Junior, Senior and Postgraduate years as

covering the time required for study in the States in which they intend to practice. Of course, this question will not arise in States that require only two years of study, and students from such States who are entitled to postgraduate standing ought to be able to do in two years the ordinary work of three, and thus qualify themselves in that time to undergo without difficulty the most rigorous examination for admission to the bar.

In arranging the course of study it is sought to take subjects in their logical sequence. The less difficult, though by no means the less important, come in the Junior year, while the more technical are dealt with in the Senior year, except in the case of Pleadings and Evidence. A knowledge of these renders moot court work intelligible and profitable to an exceptional degree, and hence they enter into the plan of instruction in the Junior year. The moot court practice is an important factor in the course of instruction for all the classes, and there can be no question regarding the advisability of learning and applying the rules of pleading and evidence at as early a date as practicable. Following are the chief subjects of study in the Junior year and the names of some of the authors of text-books dealing with them :

### **The Common and Statutory Laws, with Exercises in Case Reading and Statutory Constuction.**

*Black on Interpretation of Laws, Bishop's Written Law, Sutherland on Statutory Construction, Curtis' Federal Statutes.*

### **Persons and Domestic Relations.**

*Tiffany, Dwight, Schouler, Reeves, Rodgers.*

### **The Law of Contracts.**

*Clark, Lawson, Bishop, Beach, Anson, Parsons.*

### The Law of Torts.

*Hale, Jaggard, Cooley, Hilliard, Addison, Bishop's Non-Contract Law.*

### Criminal Law and Procedure.

*Clark, Bishop, Heard, May, Hawley & McGregor, Washburn, Wharton, Stephen.*

### Medical Jurisprudence.

*Reese, Dean, Beck, Taylor.*

### Common Law Pleadings.

*Shipman, Gould, Stephen, Shinn, Heard, Chitty, Perry.*

### Code Pleadings and Practice.

*Bliss, Maxwell, Boone, Phillips, Thompson on Trials, Elliott's General Practice, Elliott's Appellate Procedure, Foster's First Book of Practice, Estee's Pleadings.*

### Evidence.

*Jones, Underhill, Greenleaf, Wharton, Reynolds, Roscoe, Starkie, Stephen, Best, Lawson on Expert and Opinion Evidence.*

### Sales.

*Tiffany, Tiedeman, Benjamin.*

### Insurance.

*May, Elliott, Wood, Bliss, Joyce.*

### Agency.

*Mechem, Evans, Story, Wharton.*

### Partnerships.

*Bates, George, Lindley, Parsons, Pollock.*

It would be supererogatory to enumerate the subdivisions or branches of the subjects mentioned. All of them, how-

ever, receive due attention and are fully explained. And it may be stated that, with a view to enabling students to obviate the expense of purchasing many book, subjects of brief compass are taught, as may seem practicable, by means of lectures, case reading, quizzes, theses and moot court trials. But should text-books be preferred at any time, resort may be had to their use.

### SENIOR CLASS—THIRD YEAR.

So much of what has been stated with reference to the preceding classes is applicable also to students of the Senior year that it will be unnecessary to enlarge on the nature of their work. A detailed description of it might involve repetition to some extent, and thus become tedious. Those eligible to membership are such as have satisfactorily finished the studies of the first and second years and earned the right to promotion. However, in compliance with a custom generally recognized by the leading universities, lawyers in good standing who desire to join the class, in order to broaden and systematize their knowledge of the law, are also admitted to it. On passing a satisfactory examination at the end of the year they become, like other students, entitled to the degree of LL. B. And the same courtesy is extended to students of good moral character who have acceptably finished the work of two years in law schools or law departments of other universities. The leading subjects of study, together with the names of the authors of some of the text-books treating of them, are here presented:

#### Equity Jurisprudence.

*Fetter, Tiedeman, Bispham, Snell, Story, Adams, Merwin.*

#### Equity Pleadings and Practice.

*Shipman, Shinn, Story, Lube, Shipp & Daish.*

**International Law.**

*Glenn, Hall, Story, Vattel, Woolsey, Wheaton, Halleck.*

**Constitutional Law.**

*Black, Cooley, Von Holst, Desty, Story, Hamilton, Madison and Jay in the Federalist.*

**Private and Municipal Corporations.**

*Clark, Elliott, Beach, Field, Angell & Ames, Dillon, Tiedeman, Wild.*

**Personal Property.**

*Tiedeman, Darlington, Schouler, Smith, Williams.*

**Real Property.**

*Hopkins, Tiedeman, Williams, Washburn, Willard, Boone.*

**Wills, Executors and Administrators.**

*Croswell, Redfield, Jarman, O'Hara, Wigram.*

**Bailments and Common Carriers.**

*Hale, Hutchinson, Edwards, Schouler, Story.*

**Negotiable Instruments or Commercial Paper.**

*Norton, Tiedeman, Daniel, Chalmers, Randolph.*

**Suretyship and Guaranty.**

*Brandt, Baylies, De Colyar, Pitman, Pingrey.*

The subdivisions of the principal subjects indicated in the preceding list are, of course, included in the general terms designating those subjects, and it is unnecessary specially to enumerate them. For example it would be superfluous to refer specifically to Arbitration, Demand, Estoppel, Injunction, Insolvency, Notice, Protest, Assessment, Taxation, Mandamus, Quo Warranto, Ultra Vires, Recoupment, Set-



off, Counterclaim, Debtor and Creditor, and the like, for they are carefully considered and fully explained in connection with the broader subjects to which they relate.

The subjects of study are not necessarily taken, one by one, in consecutive order, as given in the list. Three or four of them may engage the attention and demand the work of the class at the same time. To illustrate: The class meets for recitation three or four times daily—say once or twice in the forenoon and twice in the afternoon. International Law may be chosen for the morning hour, special work in office business or court practice afterward, Constitutional Law the first hour in the afternoon and Municipal or Private Corporations later. Once a subject is chosen for a particular class, whether first, second, third or fourth in the daily routine, it is continued exclusively in the same class, without break or interruption, until finished. The special work indicated consists in conveyancing, preparation of pleadings, the manner of taking appeals and office business generally. It is intended more particularly for the Seniors and Postgraduates. The Senior students are expected to devote approximately twenty hours a week to recitations or class work.

By the system outlined in the foregoing paragraph it is sought to keep each subject before the mind of the student until he firmly grasps and understands it. Thus it becomes distinctively and permanently fixed in the mind. The practice of teaching to the same class one subject one day, another the next, and still another the day following, as where non-resident professors, each with a different subject, follow daily one the other, finds no encouragement at Notre Dame. Such blending of subjects and intermingling of principles manifestly tend to confusion of thought and chaos of subject-matter. It is admittedly very difficult in such case to comprehend and understand the law as a

symmetrical whole — a system majestic and beautiful in its harmonious entirety.

#### POSTGRADUATE COURSE—FOURTH YEAR.

Only graduates in law are admitted to this course. But these may be from any other university in good standing, as well as from our own Law Department. A year can very profitably be given to the work prescribed for graduation in it. The degree conferred is that of Master of Laws. The work of this course is eminently practical and of the greatest possible utility to those who intend to engage in the practice of the profession on their own account at an early date, and not to give two or three years of probation to the drudgery of a clerkship at small salary in some office.

Every year of study greatly increases the interest of the student in the law and his power to understand it. If bright and industrious, he ought to do as much effective work while a Senior as he did during the two preceding years, and his capacity to learn ought to increase in corresponding ratio in the Postgraduate course. By working earnestly and devotedly during the year he can review the studies of the preceding three years and confidently reach out in other directions to acquire additional knowledge. The nature of his work and the subjects of his study may be briefly indicated :

*Study of the Statutes and System of Pleadings of his State.*  
*Practice in taking Depositions.*

*Frequent Participation in Moot Court Trials.*

*Arguments on Motions for New Trials.*

*Preparation of Bills of Exceptions, Briefs, Records and  
Abstracts of Records in Appeals.*

*The Framing of Arguments for a Rehearing.*

*Duties of Masters in Chancery, Referees and Arbitrators.*

*Duties of Assignees and Receivers; also, of Public Officers.*



*Examination of Abstracts of Title and the Making of Deeds, Mortgages, Leases, etc., in Conveyancing.*

*A Critical Study of Pleadings, with Reference to Forms and Substance.*

*Jurisdiction of the Federal Courts.*

*The Roman Law and Comparative Jurisprudence.*

The exercises of the class in office work are attended not only by the students of the Postgraduate course, but also by the Seniors. From a practical point of view, these exercises are highly important, and the change in them annually is sufficient to suggest novelty and make them highly interesting and instructive to the students of succeeding years, as where Seniors finish the Postgraduate course. This work includes the examination of abstracts of title, practical examples in conveyancing, a critical study of the different forms of pleadings and the general business of a successfully conducted law office. While even one year of study in this class is admittedly very helpful, if not actually necessary, yet the benefits and advantages that accrue from attending a second year cannot well be overestimated.

### THE COMMON LAW

is taught primarily at Notre Dame. This is the law generally prevailing throughout the Union—the law that obtains in the States. It addresses itself to almost all the relations of life. In fact, about nineteen out of every twenty cases tried in our courts are decided in accordance with its principles. It is generally uniform in its operation. However, the statutory enactments of State legislatures overcome and displace it, so far as they conflict with its provisions. These enactments differ materially in the different States, owing to unlike conditions and local differences. Thus it is that the laws of certain States are so radically unlike the laws of other States. Of course, there are instances in which

statutes are passed to cover acts and conditions not provided for by the common law ; but in most instances the existing statutes simply declare, qualify or render inoperative some of its rules.

In view of these facts, thorough instruction is here given in the common law. Neither lawyers nor judges pretend to know the statutes of any other State than of that in which they practice or preside. In fact, a knowledge of the statutes of different States would be more confusing and bewildering than profitable to judges, lawyers and students. Moreover, they are liable to be radically changed from time to time by legislative bodies representing diverse political interests and opinions. In an examination for admission to the bar of this or any other State, no question is put and nothing is said relative to the statutes of sister States. In fact, the States are treated as foreign to one another in law. There are, however, certain fundamental statutory enactments that exist without material diversity in their scope and purpose in almost all the States. Again, other statutes somewhat less important and fundamental in character exist in groups of States. Such statutes as these may be profitably studied in class, in connection with the common law ; but it would be worse than useless for a student to attempt to investigate and study the mazes of statutory differences in the several States. Hence, it is suggested as advisable for each of the Senior and Postgraduate students to procure and have with him for independent study when he comes in September a copy of the revised statutes of his State or of the State in which he intends to practice.

### GRADUATES

of the Law Department have met with exceptional success, it has been noted, in passing examinations for admission to the bar. Nevertheless, it may be in point to state that it

ought hereafter to be comparatively easy for them to meet the requirements of the severest tests in that line, in view of the increase in the number of daily recitations and the lengthening of the period of instruction. By way of showing the full accord and co-operation of the Faculty in that regard with the bar and the bench of the country, attention may be drawn to the following authoritative expression on the subject, which is embodied in a resolution passed by the American Bar Association in 1897:

*"Resolved, That the American Bar Association approves the lengthening of the course of instruction in law schools to a period of three years, and that it expresses the hope that as soon as practicable a rule may be adopted in each State, which will require candidates for admission to the bar to study law for three years before applying for admission."*

It would certainly be disappointing now to meet a graduate timid at the prospect of an examination. With the right spirit and proper training, he ought to face it cheerfully and unhesitatingly. However, the Supreme Court of Indiana has adopted a rule providing for the admission of graduates of this Department on motion, or without examination. Under this rule they may, being voters, present themselves before the Judges of the Court, exhibit their diplomas, and, on motion of some attorney, followed by the administration to them of the oath of office, be admitted by proper order to the bar, receiving the certificates of licensed attorneys, and having their name inscribed on the "roll of honor" of the Court. This contains the names of those who furnish evidence of having satisfactorily finished the study of law before applying for admission to the bar. Recently, too, the Board of Examiners of Wisconsin accredited our Law Department as on an equality in the matter of thoroughness with that of their State University, and the law graduates of Notre Dame may now be admitted

to the bar of that State on presentation of their diplomas to the Board for indorsement.

### THE LAW DEBATING SOCIETY

holds its meetings on Saturday evenings. All students of the Department are members of it. They are required, each in his turn, to participate in its debates and other exercises. The debates commonly deal with questions germane to the law. However, subjects of history, political economy, and the like, are also in favor. An excellent opportunity is afforded at the meetings of the society to develop skill, power and fluency in public speaking. The graces of the elocutionist and the persuasive powers of the orator may here be cultivated and strengthened. All can increase in force and fluency of thought and expression by attending regularly and participating in the exercises of this society. Officers are elected twice yearly by the students themselves. They select also a competent critic to note the mistakes made in pronunciation or otherwise by the speakers at each meeting, and to read a carefully prepared paper correcting the same at the meeting following. A Professor presides, aids the members by his counsel and suggestions, and decides the questions under discussion on the merits of the arguments.

### THE LAW LIBRARY

adjoins and communicates directly with the Lecture Room, in Sorin Hall. Students have uninterrupted access to it at all reasonable hours. They may frequent it as often as they choose for the purpose of studying cases, preparing for moot court trials, finding authorities for their monthly theses, referring to the cases cited in the text-books and lectures, or reading the standard treatises. Every decision rendered for many years by the State, Territorial and Federal courts may here be found. Consequently, not to

repeat other reasons already stated, students are not required to purchase as many law books as they are obliged to have in other places. The books in the Library may be used by the law students in common as freely as can reasonably be wished, and without charge. The same is true in respect to the vast collection of miscellaneous books in the Lemonnier Library. Law books may be taken from the Library to the Lecture Room for use in moot court trials, but must afterward be returned. All students have an equal right to use them, being as it were tenants in common in that regard; but any disposition to invade the common right, whether through selfishness or thoughtlessness, by attempting to make exclusive use of them, as in placing them under cover in desks or taking them to private rooms, must be vigilantly guarded against and impartially discountenanced. Students have an undoubted right to expect that when they need any particular book they can find it in the Library, and not be compelled to lose valuable time in making inquiry or searching for it elsewhere.

No discrimination is made between law students and students of the regular collegiate courses in the matter of

### EXPENSES.

The fee for tuition, board, lodging, washing, mending, etc., is fixed at \$300 for the scholastic year. This covers all real necessities, and, considering the excellent accommodations at Notre Dame, is believed to be very reasonable. It is said that students elsewhere must pay from \$400 to \$500 a year for like services and accommodations. The cost of books may be estimated approximately at \$7 for the first year and \$20 each for the second and third years. Students have but little occasion or opportunity to spend money or to cultivate expensive habits; for they study, board and lodge at the University, in an atmosphere favor-



able to earnest work, and quite apart from the associations and temptations incident to city life. Terms of payment and other pertinent information may be found elsewhere in this catalogue, under the general caption "Expenses." It may, perhaps, be well to anticipate possible inquiries by stating that no additional charge is made for attending or becoming students of classes in the collegiate courses.

### DISCIPLINE.

The Law students, as well as all others, are expected to be earnest and industrious in the performance of the duties devolving upon them, and to secure this end and the fullest possible utilization of time the same rules of discipline apply to all the students. These rules require promptitude and regularity in class attendance, uprightness in conduct and manliness in deportment. Obedience to them tends to strengthen character, establish wholesome habits and nourish in heart and mind the qualities that mark the true gentleman and persevering scholar, the honored citizen and successful lawyer, the independent thinker and firm believer in the illimitable possibilities of industry, perseverance and self-reliance to win the crown of illustrious achievements in the domain of life.

## COMMERCIAL COURSE.



This Course can be completed in two years. It includes arithmetic, grammar, letter-writing, geography, United States history, reading, orthography, penmanship, book-keeping, Commercial Law—in other words, all the branches of a complete business education.

When the character and needs of the country are considered, this Course will appear the most practical, and one of the most important that an educational institution can afford.

Those, therefore, who have not the time or means to take a complete college course in the Classics and Sciences, would do well to enroll themselves in the Commercial Course. No plan of study is more injudicious than a haphazard selection of such studies as an inexperienced young man may fancy. The training resulting from a fixed course of studies is of the utmost benefit to the student.

The Commercial Course at Notre Dame has always received the most careful attention from the officers and the Commercial Faculty of the University. Notre Dame claims to give the graduates of this Course a more complete business training than can be obtained in any purely commercial college. Believing that a business education includes something more than a mere knowledge of book-keeping, and that a good education cannot be obtained in a few weeks, the authorities have extended this Course over two years—the shortest time in which studies necessarily used in business life can be mastered. Should a pupil desire during this period to pursue any other studies in which he may be



interested, and for which he has time, he will have liberty to do so.

General History and Linear Drawing are especially recommended to commercial students. They also have an opportunity of attending an elementary course of the Physical and Natural Sciences. Many commercial students find it also to their advantage to keep up the study of German or French, for which there are the amplest facilities. A talented and studious young man may thus in the course of two years find himself in the possession of a most valuable practical education, which will fit him to take his place in the front rank of educated business men.



## JUNIOR YEAR.

### FIRST TERM.

1. **Arithmetic**—Written and Mental—To Decimal Fractions (exclusive). Normal Union Arithmetic, *Brooks*.

2. **Grammar**—To Irregular Verbs (inclusive). Revised English Grammar.

3. **Letter Writing.**

4. **Reading and Orthography.**

5. **Geography**—General Geography of the World; Special Geography of the United States.

6. **United States History**—Through the French and Indian War.

7 **Penmanship.**

### SECOND TERM.

1. **Arithmetic**—Decimal Fractions; Denominate Numbers; Practical Measurements. Normal Union Arithmetic, *Brooks*.

2. **Grammar**—From Irregular Verbs to Syntax. Revised English Grammar.

3. **Letter Writing.**

4. **Reading and Orthography.**

5. **Geography**—Special Geography of South America, Europe, Asia, and Africa.

6. **United States History**—From the French and Indian War to the present time.

7. **Penmanship.**



## SENIOR YEAR.

### FIRST TERM.

1. **Arithmetic**—Percentage; Ratio and Proportion; as far as Involution and Evolution. Normal Union Arithmetic, *Brooks*.

2. **Bookkeeping**—Preparatory instruction and definitions; Initiatory Sets by Double Entry; Retailing by Double Entry; special practice in writing Business Paper and Business Forms. New Complete Bookkeeping, *Williams and Rogers*.

3. **Grammar**—Syntax. Revised English Grammar.

4. **Letter Writing.**

5. **Reading and Orthography.**

6. **Penmanship.**

### SECOND TERM.

1. **Arithmetic**—Percentage, Ratio and Proportion (reviewed); Involution and Evolution; Arithmetical and Geometrical Series; Higher Percentage; Mensuration; Arithmetical Analysis. Higher Arithmetic, *Brooks*.

2. **Bookkeeping**—Single Entry; changing Single to Double Entry; Retailing; Wholesaling; Shipping and Commission; Jobbing; Manufacturing; Installment and State Agencies; Joint Stock Companies; Banking; Railroading; Steamboating; Buying and Selling, Remitting, Collecting, Discounting, Accepting, and Paying Bills of Exchange. New Complete Bookkeeping, *Williams and Rogers*.

3. **Composition**—Study of the Theory of English Composition; frequent exercise in Essay and Letter Writing, etc. The Foundations of Rhetoric, *Hill*.

4. **Orthography**.

5. **Commercial Law**—General principles of Contracts; Agency; Partnership; Corporations; Guaranty; Sale of Goods; Negotiable Paper. *Clark*.

6. **Penmanship**.

## PREPARATORY SCHOOL



## FIRST YEAR.

## FIRST TERM.

**Latin**—Latin Grammar, Etymology, *Bennett*. First Book in Latin, *Tuell and Fowler*. Viri Romæ.

**English**—Grammar; Etymology; Themes.

**History**—United States History to the end of the Revolutionary War.

**Geography**—General Geography of the World. Special Geography of the United States.

**Mathematics**—Arithmetic, Fractions.

## SECOND TERM.

**Latin**—Continuation of First Term work.

**English**—(a) Grammar: Etymology continued. (b) Readings in Class: Longfellow's *Tales of a Wayside Inn*; Stevenson's *Treasure Island*; Defoe's *Robinson Crusoe*. (c) Themes: Subject matter taken from Longfellow's *Tales of a Wayside Inn*; Original Composition. The dictionary required throughout the Preparatory Courses is the *Standard English Dictionary* (Student's Edition.)

**History**—United States History, from the Revolutionary War to the present time.

**Geography**—Special Political Geography of Europe, Asia and Africa, with outlines of the Physical Geography.

**Mathematics**—Arithmetic, from Fractions to Compound Numbers.

## SECOND YEAR.

## FIRST TERM.

**Latin**—Grammar; Etymology reviewed and general rules of Syntax. *Bennett*. Cæsar; Gallic War, Books I. and II.; Composition—based on the text of Cæsar.

**Greek**—Grammar: Etymology. *Goodwin's*. Exercises, *First Greek Book*, White. (For Classical Students only.)

**English**—(a) Grammar: Syntax, Revised English Grammar. (b) Readings in class: Scott's *The Lady of the Lake*; Longfellow's *Evangeline*; Irving's *Sketch Book*; Newman's *Callista*. Themes: subject matter taken from the books read in class; Original Composition.

**Mathematics**—Arithmetic, from Compound Numbers to Percentage.

**French and German** begun by candidates for Engineering and Scientific Courses. (See entrance requirements of these Courses.)

## SECOND TERM.

**Latin**—Cæsar, Gallic War, Books III. and IV.; Composition, based on Cæsar's text; Grammar, Syntax finished, *Bennett*.

**Greek**—Grammar: Etymology Completed, Exercises, *First Greek Book*, White; Gospel of St. Luke; Selections. *Gate to the Anabasis*, Gleason.

**English**—Work of the First term continued.

**Mathematics**—Arithmetic, from Percentage and Involution.

**Algebra**—This Course is designed for beginners in Algebra, and comprises a complete study of the primary operations and fundamental principles of the science;

thorough drill work in Composition and Factoring; Highest Common Factor and Lowest Common Multiple. When competency is assured in these subjects, the principles of Fractions are considered; also exercises in reduction of Complex Fractions.



## THIRD YEAR.

### FIRST TERM.

**Latin**—Sallust: Catiline; Composition based on text of Sallust; Grammar, review, *Bennett*; Ovid: Metamorphoses.

**Greek**—Grammar, *Goodwin's* Etymology reviewed; Syntax. Xenophon's *Anabasis*. Prose composition, based on the text of the *Anabasis*.

**English**—Rhetoric, Hills' *Foundations of Rhetoric*; History of American Literature, Painter's *Introduction to American Literature*; Themes, application to Rhetoric; Readings in Class: Tennyson's *Princess*, Professor Cook's text; Milton's *Paradise Lost*, Books I. and II.; *L'Allegro*, *Il Penseroso*, *Lycidas*.

**Algebra**—This Course begins with a study of the Equation and Methods of Transformation and solution of Simple Equations; solution of problems of one and two unknown qualities; Fractional Equations; Simultaneous Equations of the first degree, and solution of problems of two or more unknown quantities. Then are considered elementary cases of Indeterminate Problems, discussion of problems and Inequalities; principles of Involution and Evolution, and theory of Exponents; Radical and Imaginary Expressions; Quadratic Surds; Radical Equations and Solution of Problems.

**Geometry, Plane**—The whole subject of Plane Geometry as given in Wentworth's *New Plane and Solid Geometry*.



The solution of original problems and theorems constitute the greater part of the Course. The student's proficiency is determined by examinations in which he is required to devise proofs of original and independent propositions.

(a) **Elementary Chemistry**—An Introductory Course of experimental lectures on familiar subjects such as water, the air and its constituents, common salt, etc., leading up to discussions of the more important elements and their properties, and the fundamental laws and phenomena of Chemistry. Reference-book, *Remsen*.

(b) **Experimental Chemistry**—A Laboratory Course to accompany Course *a*. A series of exercises to be performed by each student, and having as their main object the cultivation of the student's powers of observation and faculty of inductive reasoning. These exercises comprise a study of the principal metallic elements, including their preparation, properties, and more familiar compounds. The directions for each experiment is made as brief as possible, the observation of facts and the drawing of correct conclusions therefrom being left, so far as the nature of the experiment will permit, to the pupil.

**Physics, Elementary**—A Course of recitations and lectures, including Mechanics, Heat, Sound, Light, Electricity and Magnetism. The work is fully illustrated by experiments.

**Physiology**—Elementary.

**Botany**—Elementary. (For Civil Engineering Students.)

**History**—(a) United States,

(b) General outlines. See page 94.

## SECOND TERM.

**Latin**—Cicero, *Catilinaria*; Composition based on Cicero's



text; Virgil, Eclogues or Georgics; Prosody; Scansion of Hexameter Verse.

**Greek**—Grammar: General Rules of Syntax; Xenophon, Anabasis entire; Composition based on the text of the Anabasis.

**English**—Continuation of the First Term work.

**Algebra**—This Course begins with a review of Radicals. Then follows a study of Pure and Affected Quadratic Equations and Simultaneous Quadratics; solution of problems involving Quadratics; Arithmetical and Geometrical Progressions; discussion of Simple Indeterminate Equations and exercises. Solution of problems is rigidly enforced and numerous original exercises are added to supplement the work.

**Geometry, Solid**—Theorems pertaining to Planes and Polyhedral Angles, Polyhedrons, the Cylinder, Cone and Sphere. The study of Spherical Angles, Spherical Surfaces, the Measure of Spherical Surfaces, receive all the attention necessary to familiarize the student with this important and practical part of Geometry. Solution of original exercises, proofs of independent propositions and examinations.

**History**—See First Term.

**Zoology**—Elementary. (For Civil Engineering Students.)

Minim Department.

## MINIM DEPARTMENT.



For the care and training of boys under the age of thirteen years, there has been established a department to which the most scrupulous attention has always been paid by the college authorities: it is known as the Minim Department.

Thorough and comprehensive instruction in all the elementary branches of an English education is here imparted, together with a rudimentary knowledge of Latin, French and German. Vocal Music and Drawing Course no extra charge. The pupils of this department are taught by Sisters of the Holy Cross.

### DISCIPLINE.

The following is the order of the day: Rising at 6:40 a. m., toilet, etc.; seven, breakfast, after which there is a short time given for exercises on the campus; half-past seven, study; half-part nine, luncheon; ten, study; a quarter to twelve, toilet; twelve, dinner, followed by recreation; half-past one, study; half-past three, recreation and luncheon; half-past six, supper and recreation; half-past eight, retiring. From this it may be seen that while the Minims devote less than six hours a day to study, there are never more than two hours in succession in the class-room. The recreation and exercise in the fresh air between each two hours of study, unbend the mind and prepare the boys to return to their classes refreshed and ready for work.

The Minims are always under supervision, during the hours of recreation as well as in the class-room and study-hall. The presence, however, of the Prefect is far from being a restraint on the amusement of the boys; for while it is the duty of the Prefects to insist that their young charges shall always keep within the limits of the strictest propriety, they, at the same time, take part in all sports, organize games, and do everything in their power to foster the love of exercises. The play-ground is a broad, level, five-acre field, well supplied with turning poles, swings, ladders, rings, parallel-bars, and all other necessary gymnastic apparatus. That the boys make good use of them can be seen from their healthy, happy appearance, which invariably attracts the notice of visitors. Connected with the play-ground is a brick play-hall, 160 feet long and heated by steam. In this hall the boys play in rainy or cold weather.

The Sisters preside at the toilet; they clean and mend the clothing; see to all the needs and to the comfort and convenience of the Minims. Baths are taken every few days. Underclothing is changed regularly. Great care is taken that the boys be neatly dressed, and that the clothing be suitable for the season.

### SOCIETIES.

There are two societies in the Minim department; that of the Guardian Angels of the Sanctuary, which has for its object to supply servers for the Church offices; and the Sorin Association, which has been established with a view to give the pupils a start, as early as possible, in elocution. The society is presided over by one of the professors, who find it a pleasant duty to draw out the talent of these interesting young orators. Meetings are held once a week, after school hours. These meetings are a source of pleasure as well as

of profit. The members prepare original compositions, deliver declamations, are trained to debate, etc. Only the best behaved and more advanced in studies are admitted to membership. To encourage this young Literary Society, a Gold Medal is annually awarded at Commencement for Elocution to the most deserving member.

### GENERAL REMARKS.

The discipline to which the minims are subjected is much milder than that which is suited to students more advanced in age. Recourse is scarcely ever had to punishment. Those in charge endeavor to govern by kindness and gentleness, and by appealing to the boys' sense of honor. The names of all whose conduct and application to studies are satisfactory appear under the heads of Roll of Honor and Class Honors. To find his name mentioned in these rolls, is found to be as great a reward for the deserving pupil, as its non-appearance is a punishment for the undeserving.

Then, too, there is a Gold Medal awarded at the end of two full years to those whose deportment has been unexceptionable during that period. As this fact is made known to the Minim immediately after his entrance, he generally endeavors to shape his conduct with a view to receiving an "Honor." The greatest care is taken to form their young hearts to habits of virtue, and to inculcate the practice of refined manners. Every effort is made to foster respect and affection for parents, to whom they are expected to write at least once a week.

Not the least of the advantages enjoyed by the Minims, is their complete separation from the larger students. A commodious building known as St. Edward's Hall, affording ample accommodations for over one hundred pupils, is devoted to their use. It is four stories in height,

one hundred and fifty feet long, and forty-five feet wide; heated by steam, supplied throughout with the Edison incandescent electric light, and provided with hot and cold water. The ceilings in the Study-Hall, Class-Rooms and sleeping apartments are fifteen feet high. The windows are large and numerous, affording abundant light and ventilation. The Study-Hall commands a charming view from each of its eleven large windows. It is tastefully decorated with statuary, pictures, plants, etc. Beside the pleasure the Minims derive from studying in this bright, cheerful hall, their tastes are cultured by coming in contact with objects so refining. Fronting the building is a handsome park, which, with its fountains, rare trees and flowers, add not a little to the beauty of St. Edward's Hall as well as to the happiness of its inmates.

These remarks, which have been made to satisfy parents and others who frequently write for more detailed information, will show that, while the Minims have every possible advantage to aid them in acquiring a foundation for future study, they have a home, where they enjoy the same ease and freedom that they would enjoy under the care of their mothers.

## EXPENSES.



Matriculation Fee (payable on first entrance).....	\$ 10.00
Board, Tuition, etc., per session of ten months.....	250.00

The above rates are payable in advance as follows:

On entrance in September.....\$150.00

January 15th..... 100.00

Extras Optional.

The charge per session of ten months for Piano lessons, and the use of instrument in this department is \$35.00; for Violin, Guitar or Mandolin, \$25.00.

Pupils who remain during the two Summer  
Vacation Months are charged \$40.00.

Accounts are subject to sight draft, without notice, if not paid within ten days after they have been rendered.

Each pupil, on entering this department should have six shirts, four pairs of drawers, three night shirts, twelve pocket handkerchiefs, six pairs of stockings, six towels, two hats or caps, two pairs of shoes, two suits of clothes for winter, two suits for summer, one overcoat, toilet articles, etc. This direction concerning clothing is a suggestion, not a regulation.



## CATALOGUE OF STUDENTS.

From September, 1900, to June 1, 1901.



In this list are not included the names of those students who are dismissed or withdrawn at the request of the College authorities during the scholastic year.

Arana, Victor M.....	Peru, So. America
Abadia, Augustin J.....	Cuba .....
Askanas, Jacob S.....	Missouri.....
Antoine, Louis M.....	Illinois .....
Althoff, Arnold S.....	Ohio .....
Anderson, Clarence J.....	Indiana .....
Allen, John O.....	Illinois .....
Ahern, Eugene T.....	Illinois .....
Abercrombie, John J.....	Illinois .....
Barry, Harry P.....	Iowa .....
Bohner, George H.....	Illinois .....
Brown, Henry E.....	Ohio .....
Brogan, Anthony J.....	Pennsylvania ....
Burkitt, George W.....	Texas .....
Baldwin, William E.....	Illinois .....
Barry, Arthur J.....	Illinois .....
Brown, August J.....	Ohio .....
Bradley, James F.....	Illinois .....
Bandy, Claude W.....	Illinois .....
Brent, Francis C.....	Florida.....
Bouza, Francis E.....	South Dakota....
Boyer, Gaston J.....	Mexico.....
Bardanoure, Pedro F.....	Mexico.....
Blakeslee, Arthur S.....	Ohio .....
Barry, Francis J.....	Illinois .....
Brunet, Ysidro Soler.....	Cuba .....
Benson, Charles A.....	Rhode Island....
Butler, Philip V.....	Nova Scotia.....
Bergan, Francis J.....	Indiana.....
Brauchler, Wm. F.....	Ohio .....

Beacom, George M.	Iowa
Bergan, Patrick W.	Pennsylvania
Boscowitz, Hostilio N.	Cuba
Blakeslee, Rolland T.	Ohio
Bescher, Robert H.	Ohio
Brand, Harry P.	Indiana
Baca, Eustacio C. de.	New Mexico
Bauman, E. Walter.	Ohio
Burger, Anthony J.	New York
Beechinor, Herbert M.	New York
Brooks, Don M.	Illinois
Bosworth, Alvah C.	Illinois
Baude, Francis E.	Illinois
Berteling, John Francis	Indiana
Butler, James	Indiana
Brown, Edward P.	Minnesota
Burke, Francis P.	Wisconsin
Bradley, James C.	District Columbia
Blume, August J.	Indiana
Burke, Joseph H.	Wisconsin
Burke, Eugene P.	Illinois
Burke, Thomas E.	Illinois
Bouza, John J.	South Dakota
Best, Arthur C.	Montana
Best, Louis E.	Montana
Buckler, Claude M.	Texas
Buckler, Julius A.	Texas
Burns, Juan T.	Mexico
Byrnes, John F.	Iowa
Birk, Walter O.	Illinois
Blanchard, Charles	New Mexico
Bassi, Anthony M.	Illinois
Byron, Michael	Illinois
Basave, Augustine	Mexico
Bassi, John T.	Illinois
Corcoran, Patrick J.	Illinois
Cornell, Francis B.	New York
Coquillard, Alexis P.	Indiana
Collins, Daniel E.	Massachusetts
Culkin, Daniel L.	Illinois

Cleary, Leo.....	Nebraska .....
Cooney, John J.....	Illinois .....
Carlton, Joseph R.....	New Jersey .....
Curry, John P.....	Connecticut.....
Campbell, William M.....	Massachusetts....
Crimmins, Timothy.....	Illinois.....
Carmody, John D.....	British Columbia.
Carey, Louis J.....	Michigan .....
Clyne, Joseph A.....	Kansas.....
Corbett, Vincent.....	Michigan .....
Crumley, Harry V.....	Ohio .....
Casey, Joseph A.....	New York.....
Corbidge, Albert.....	Illinois.....
Crosas, Philip.....	Puerto Rico.....
Cullinan, Joseph J.....	Ireland.....
Canedo, Enrique O.....	Mexico. ....
Canedo, Ignacio.....	Mexico. ....
Cox, Thomas H.....	Indiana.....
Church, Charles M.....	Iowa .....
Cullinan, Charles J.....	Pennsylvania ....
Conway, Neil P.....	Iowa .....
Celis, F. Javier.....	Mexico .....
Cannon, Dominic.....	Pennsylvania ....
Casparis, Kenneth E.....	Ohio.....
Corbidge, Walter J.....	Illinois.....
Creel, Luis R.....	Mexico .....
Carr, Carlyle R.....	Michigan.....
Cary, Clarence C.....	Illinois.....
Cullen Arthur A.....	Michigan.....
Clifford, Fred J.....	Illinois.....
Campbell, John C.....	Missouri.....
Crowley, Michael J.....	Illinois.....
Coquillard, Joseph A.....	Indiana.....
Cuesta, Bona Ventura.....	Cuba .....
Cuesta, Ramon.....	Cuba .....
Connolly, Cassius H.....	Illinois.....
Casey, Grover F.....	Illinois.....
Creel, Edwardo.....	Mexico.....
Chittenden, Irving B.....	Illinois.....
Cartier, Antoine.....	Illinois.....
Crane, James E.....	Michigan.....

Crane, Clarence J.....	Michigan.....
Conover, Huntington St. C.....	Illinois.....
Corbett, James J.....	Illinois.....
Corley, John L.....	Missouri.....
Casey, Daniel W.....	Indiana.....
Cameron, William H.....	Michigan.....
Crowley, Timothy J.....	Ireland.....
Corcoran, Joseph M.....	Illinois.....
Corcoran, Wendell M.....	Illinois.....
Cunningham, William C.....	Illinois.....
Cypher, George A.....	Pennsylvania .....
Cooney, Maurice J.....	Illinois.....
Corcuera, Javier L.....	Mexico .....
Carroll, Charles.....	Michigan .....
Conlon, Clarence B.....	Minnesota.....
Corbridge, James H.....	Illinois.....
Crane, Lawrence W.....	Michigan .....
Connor, Charles H.....	Pennsylvania .....
Clarke, Robert R.....	Illinois.....
Cary, Howard C.....	Illinois.....
Cunnea, John J.....	Illinois.....
Cary, Charles A.....	Illinois.....
Calligan, Leslie R.....	Illinois.....
Dinnen, William F.....	Indiana.....
Donnelly, Thomas L. K.....	Michigan.....
Dwyer, Thomas F.....	Massachusetts.....
Donahoe, Mathew J.....	Illinois.....
Dukette, Francis F.....	Michigan .....
Davitt, Harold H.....	Michigan .....
DeLone, Louis S.....	Pennsylvania .....
Duggan, James B.....	Iowa .....
DuBrul, Davila S.....	Ohio .....
Dale, Walter M.....	Minnesota .....
Davis, Grover C.....	Indiana.....
Delgado, Salvador P.....	Mexico.....
Dwan, Leo G.....	Illinois.....
Davey, Frank P.....	Michigan .....
Dale, Walter M.....	Minnesota .....
Dinnen J. Francis.....	Indiana.....
Dwyer, Thomas F.....	Indiana.....

Dunne, James L.....	Montana.....
Despins, Howard S.....	Michigan.....
Davis Glen D.....	Kansas.....
Daly, Bernard M.....	Ohio.....
Doar, James L.....	Wisconsin.....
Dwan, Aloysius J.....	Illinois.....
Dumanois, Arthur E.....	Michigan.....
Deasey, James J.....	Illinois.....
Dierssen, Arthur A.....	Illinois.....
Defrees, Victor W.....	Indiana.....
Dunham, Charles E.....	Michigan.....
Downer, Henry O.....	Georgia.....
Donahoe, Henry D.....	Illinois.....
Dee, Simon R.....	Illinois.....
Dee, William T.....	Illinois.....
D'Heur, Malbrook P.....	Wisconsin.....
Draper, William A.....	Illinois.....
Dames, William J.....	Missouri.....
Dubbs, John W.....	Illinois.....
Durcan, Patrick.....	Ireland.....
Driscoll, Edward J.....	Wisconsin.....
De Wulf, Emiel P.....	Indiana.....
Davis, Ernest A.....	Indiana.....
Dempsey, Joseph A.....	Illinois.....
Dooner, Herbert J.....	Canada.....
Devereaux, Arthur J.....	Illinois.....
Diebold, Clarence J.....	Pennsylvania.....
Dempsey, Neal E.....	Michigan.....
Davey, Bert.....	Michigan.....
Dorian, Francis P.....	Indiana.....
Dolan, LeRoy B.....	Illinois.....
Delker, Alfred G.....	Kentucky.....
Eiffert, William.....	Illinois.....
Evans, George P.....	Illinois.....
Eagan, Michael D.....	Indiana.....
Enriquez, Benjamin R.....	Mexico.....
Emerson, Ritchie J.....	Texas.....
Egan, William J.....	Canada.....
Ervin, John B.....	Indiana.....
Elias, Joseph J.....	Poland.....

Frawley, Louis M.....	Nebraska.....
Fortin, Albert C.....	Illinois.....
Fox, Robert L.....	Indiana.....
Fahy, Joseph A.....	Georgia.....
Falomir, Jose M.....	Mexico.....
Fleischer, Max H.....	Illinois.....
Fink, Henry S.....	Maryland.....
Fernandez, Bernardo I.....	Cuba.....
Faragher, John.....	Ohio.....
Fetherston, Louis M.....	Iowa.....
Feeney, Joseph D.....	Minnesota.....
Fox, Oscar A.....	Indiana.....
Fansler, Michael L.....	Indiana.....
Fleet, William J.....	Indiana.....
Fleming, Shirley J.....	Ohio.....
Farabaugh, Gallitzen.....	Pennsylvania.....
Fleischer, Oscar F.....	Illinois.....
Fogerty, John H.....	Indiana.....
Freyman, Charles M.....	Iowa.....
Foley, Frank T.....	Minnesota.....
Fack, Fred R.....	Montana.....
Fergus, C. Delos.....	Illinois.....
Fox, Mark H.....	Wisconsin.....
Freese, George W.....	Ohio.....
Fredell, Edwin J.....	Indiana.....
Farley, John F.....	New Jersey.....
Finner, Charles R.....	Canada.....
Finnegan, Edward P.....	Illinois.....
Furlong, Nicholas R.....	Wisconsin.....
Foertsch, George F.....	Ohio.....
Flaherty, Edward M.....	Indiana.....
Foik, Paul J.....	Ontario, Canada.....
Faragher, James.....	Ohio.....
Gilbert, Edward J.....	Illinois.....
Gaston, Francisco G.....	Cuba.....
Gallagher, Edward P.....	Pennsylvania.....
Garza, Rodolfa M.....	Mexico.....
Garza, Marcelino L.....	Mexico.....
Guerra, Enrique L.....	Mexico.....
Gibbons, Alexander J.....	Ohio.....

Grice, Frank Jr.....	Texas.....
Green, Erie J.....	Michigan.....
Gomez, Manuel M.....	Mexico.....
Garcia, Maximo.....	Mexico.....
Guerra, Samuel.....	Mexico.....
Gilmartin Francis J.....	Indiana.....
Guillen, Alberto.....	Mexico.....
Glynn, Ralph L.....	Wisconsin.....
Graffis, Joseph T.....	Indiana.....
Geringer, Emil J.....	Illinois.....
Gallastequi, Frederico L.....	Mexico.....
Gali, Rafael.....	Cuba.....
Gearin, Walter J.....	Oregon.....
Gaukler, Francis O.....	Michigan.....
Geraghty, James J.....	Minnesota.....
Groogan, Dominic J.....	Pennsylvania.....
Griffin, Francis J.....	Montana.....
Gibson, John H.....	Texas.....
Gibson, William K.....	Texas.....
Gatens, Raymond S.....	Tennessee.....
Gately, Edward I.....	Illinois.....
Graham, Thomas W.....	Ohio.....
Geraghty, Hubert A.....	Minnesota.....
Glaspie, James W.....	Minnesota.....
Gerstbauer, James Leo.....	Indiana.....
Gallart, Jose P.....	Cuba.....
Graham, Robert J.....	Ohio.....
Gasman, William F.....	Illinois.....
Garrigan, John J.....	Ohio.....
Goodhue, Wells E.....	Illinois.....
Goedell, Oscar H.....	Pennsylvania.....
Gruza, Stanislaus A.....	Indiana.....
Gainor, Leo C.....	Indiana.....
Gorka, Stanislaus.....	Indiana.....
Gorski, Marcellinus K.....	Illinois.....
Gallagan, James C.....	New York.....
Graham, James C.....	Illinois.....
Garrity, William H.....	Illinois.....
Gormley, George E.....	Wisconsin.....
Glasheen, William P.....	Illinois.....
Gulde, William C.....	Iowa.....



Gillen, Charles I.....	Ohio .....
Graham, Edward P.....	Montana.....
Hay, Edward F.....	Mexico.....
Hanley, Robert E.....	Idaho.....
Highstone, Lawrence S.....	Michigan.....
Hayes, John P.....	New York.....
Hanhauser, George J.....	Pennsylvania ....
Hays, Stephen J.....	Utah .....
Hauser, Fred A.....	Ohio.....
Hines, Harry P.....	Michigan .....
Hogan, Harry G.....	Indiana .....
Halpin, George L.....	Michigan .....
Harrington, John J.....	Indiana .....
Herbert, George L.....	Illinois.....
Helding, Victor.....	Indiana.....
Huffman, William J.....	Illinois.....
Hcover, Henry H.....	Illinois.....
Hoban, Martin C.....	Indiana.....
Hunt, Theodore.....	Missouri.....
Hawkins, Mortimer.....	Illinois.....
Hernandez, Rafael.....	Mexico .....
Herbert, Martin B.....	Illinois.....
Hayes, Arthur T.....	Ohio .....
Higgins, William P.....	Massachusetts...
Hubbell, Lorenzo.....	Arizona.....
Hart, Lawrence A.....	Indiana.....
Haney, Charles E.....	Indiana.....
Hartnett, Daniel J.....	New York.....
Hackman, August J.....	Indiana.....
Hughes, Francis B.....	Nebraska .....
Hoff, Albert S.....	Wisconsin.....
Hanford, George H.....	Illinois.....
Hall, William P.....	Illinois.....
Hubbard, Charles H.....	Indiana.....
Hoffman, Louis E.....	Illinois.....
Houser, Benjamin H.....	Indiana.....
Hoffman, Francis.....	Illinois.....
Healy, Walter C.....	Illinois.....
Hoff, Louis R.....	Indiana.....
Heinz, Richard C.....	Illinois .....

Hamel, William.....	Illinois .....
Hanyz, Martin S.....	Indiana .....
Harte, John.....	Ireland.....
Halloran, William H.....	Illinois.....
Heiser, Leo J.....	Indiana .....
Hennessy, John J.....	Ireland.....
Henehan, Vincent P.....	Rhode Island....
Horwarth, George F.....	Indiana .....
Hagerty, Cornelius J.....	Indiana .....
Hock, Fred X.....	Ohio .....
Hennebry, John F.....	Illinois.....
Hommon, Charles R.....	Illinois.....
Hunter, Albert B.....	Missouri.....
Hake, Adolph J.....	Michigan.....
Hemmerich, Harry J.....	Illinois.....
Harwood, G. Carlton.....	Indiana.....

Ill, Alphonse P.....	Ohio .....
Irving, Thomas P.....	Wisconsin .....

Jones, Vitus G.....	Michigan .....
Jung, Adolph W.....	Wisconsin .....
Jennings, Samuel.....	Wisconsin .....
Joyce, Edward W.....	Pennsylvania....
Jennings, Asher M.....	Indiana.....
Jennings, Louis E.....	Indiana.....
Johnson, Melford H.....	Yukon Ter., Can.
Jennings, Raymond.....	Wisconsin .....
Johnson, Arthur I.....	Illinois.....
Jenkins, Joseph M.....	Kentucky.....
Jaerger, Francis A. X.....	Indiana.....

Kachur, Albert.....	Indiana.....
Kearney, James F.....	Illinois.....
Krost, Robert A.....	Indiana.....
Kinney, Joseph C.....	Wyoming.....
Krug, Albert L.....	Ohio .....
Kasper, Fred J.....	Illinois.....
Kasper, Robert A.....	Illinois.....
Keefe, Lester J.....	Illinois.....
King, Charles E.....	Ohio .....

Kinsella, William J.....	Missouri.....
Kahler, Charles P.....	Maryland.....
Keating, Charles J.....	Illinois.....
Kanaley, Byron V.....	New York.....
Knell, John G.....	Illinois.....
Kotte, Francis H.....	Ohio.....
Kuppler, George W.....	Washington.....
Kelly, George H.....	Wisconsin.....
Kirby, Harley E.....	Indiana.....
Kelly, Leo J.....	Illinois.....
Kelly, John R.....	New York.....
Kotte, Albert A.....	Ohio.....
Kasper, Francis P.....	Illinois.....
Kennedy, Clarence J.....	Illinois.....
Kolck, Richard.....	Iowa.....
Kinsella, Dalton L.....	Missouri.....
Kellner, Francis A.....	Kentucky.....
Krieger, John T.....	Indiana.....
Knight, Leon.....	Michigan.....
Kelly, Edward A.....	Georgia.....
Kelley, Charles J.....	Minnesota.....
Kasper, William H.....	Illinois.....
Knott, Henry.....	Indiana.....
Kenney, Joseph W.....	Indiana.....
Kelly, John R.....	Indiana.....
Kolupa, Ladislaus A.....	Indiana.....
Kelleher, Joseph P.....	Massachusetts.....
Kelly, Louis M.....	Indiana.....
Kennedy, Leo.....	Pennsylvania.....
Lynch, D. Webster.....	Wisconsin.....
Lavelle, John C.....	Iowa.....
Lins, George J.....	Illinois.....
Lilly, John M.....	Illinois.....
Loughran, John J.....	Pennsylvania.....
Lyle, Lynn Hastings.....	Nebraska.....
Larkin, William P.....	Indiana.....
Lippman, Oscar.....	Indiana.....
Leonard, John K.....	West Virginia.....
Lomelin, Ignacio F.....	Mexico.....
Locke, J. Clyde.....	Indiana.....

Lynch, Robert E.....	Illinois.....
Lawton, Jasper H.....	Texas.....
Langknecht, Walter N.....	Illinois.....
Lantry, Joseph T.....	Illinois.....
Laux, Carl A.....	Illinois.....
Luken, Lawrence H.....	Indiana.....
Lyman, Paul I.....	Illinois.....
Lynch, John J.....	Illinois.....
Lavelle, John J.....	Indiana.....
Lyons, Thomas D.....	South Dakota....
Lavin, Walter H.....	Khode Island....
Lindemann, Philip.....	Mississippi.....
Lahey, Sylvester B.....	Indiana.....

Mullen, John I.....	Minnesota.....
Mattix, Charles E.....	Minnesota.....
Moxley, George T.....	Illinois.....
Muriel, Ignacio.....	Mexico.....
Morgan, James E.....	Iowa.....
Maher, William H. N.....	Illinois.....
Moore, William A.....	Illinois.....
Mulcrone, Charles J.....	Michigan.....
Mulligan, Charles E.....	Illinois.....
Magie, Woodbury W.....	Minnesota.....
Marrinan, Joseph E.....	Oklahoma Ter....
Moon, Charles J.....	Kansas.....
Maloney, William E.....	Iowa.....
Mulligan, Edward J.....	Colorado.....
Mitchell, Clement C.....	Michigan.....
Meyer, Fred W.....	Illinois.....
Murphy, Daniel L.....	Illinois.....
Moran, Harold C.....	Indiana.....
Murphy, John S.....	Wisconsin.....
Munoz, Jorge.....	Mexico.....
Marker, Ernest.....	Indiana.....
Medley, Benedict F.....	Kentucky.....
Madero, Daniel H.....	Mexico.....
Madero, Benjamin....	Mexico.....
Madero, Julio E.....	Mexico.....
Madero, Gabriel J.....	Mexico.....
Muriel, Jose.....	Mexico.....

Murphy, Robert D.....	Wyoming.....
Mix, Kenyon W.....	Indiana.....
Mulligan, Bernard J.....	Colorado.....
Medrano, Joaquin H.....	Cuba.....
Madero, Raul M. H.....	Mexico.....
Miles, Charles E.....	Illinois.....
Munson, Harold A.....	Michigan.....
Mooney, Edward L.....	Minnesota.....
Munson, Porter W.....	Missouri.....
Moran, James M.....	Ohio.....
Madden, Thomas E.....	Indiana.....
Murphy, John F.....	Illinois.....
Molumphy, David J.....	Connecticut.....
Malamphy, Walter J.....	South Dakota.....
Morrissey, John.....	Ireland.....
Marr, George J.....	Colorado.....
Murphy, Timothy R.....	Michigan.....
Mullally, Charles A.....	Illinois.....
Mannion, James C.....	Illinois.....
Moschke, J.....	Pennsylvania.....
Moloney, William M.....	Indiana.....
Murphy, Joseph E.....	Wisconsin.....
Miller, William T.....	Illinois.....
Matteson, De Forrest A.....	Illinois.....
Murphy, Edgar J.....	Indiana.....
Martin, Paul R.....	Indiana.....
Moody, George A.....	Illinois.....
McGee, George A.....	Illinois.....
McKeever, Francis H.....	Iowa.....
McCullough, Gilbert F.....	Iowa.....
McCambridge, George J.....	Illinois.....
McNerney, James H.....	Kansas.....
McDonell, Alexander A.....	Wisconsin.....
McGarrell, John J.....	District Columbia.....
McGlew, Henry J.....	Massachusetts.....
McCracken, Charles S.....	Ohio.....
McNamara, Peter J.....	Massachusetts.....
McGinley, Hugh S.....	Iowa.....
McWeeny, Francis B.....	Indiana.....
McGillis, Grover C.....	Michigan.....

McNamara, William T.....	Michigan .....
McConachie, John A.....	Pennsylvania ....
McAdams, Harry C.....	Indiana.....
McDonough, Patrick J.....	New York.....
McInerny, William A.....	Indiana.....
McElligot, Peter P.....	New York.....
McAuley, Milo J.....	Ohio .....
McHugh, James A.....	Pennsylvania ....
McDougall, Natt.....	Wisconsin.....
McLaughlin, Hugh P.....	Iowa .....
McCarthy, John H.....	Missouri.....
McElroy, James W.....	Illinois.....
McAuley, John A.....	Ohio .....
McNulty, Francis R.....	Wisconsin.....
McAlpine, Roy M.....	Illinois.....
McCarthy, Joseph A.....	Missouri.....
McWeeny, John.....	Indiana.....
McDermott, Edward W.....	Illinois.....
McCarthy, John F.....	Indiana.....
McFarland, Alexander W.....	Ohio .....
McCormick, Washington J.....	Montana.....
McNeil, William R.....	Wisconsin .....
McDonald, Cassius M.....	Illinois.....
McLean, William A.....	New York.....
NcMahon, Frank J.....	New York.....
McBride, Paul H.....	New York.....
McDowd Edwin J.....	Illinois .....
McIver, James S.....	New York.....
McIver, Francis F.....	New York.....
McGill, Robert J.....	Illinois .....
McFarland, Clarence J.....	Ohio .....
McBride, William A.....	New York.....
McBride, John L.....	New York.....
McFadden, Thomas J.....	Illinois.....
McGowan, John T.....	Wisconsin.....
McKeon, Fred.....	Connecticut . . .
McCarthy, Jeremiah J.....	New York. ....
McCaulay, Hugh B.....	Rhode Island...
McGinn, John C.....	Rhode Island...
Nolan, William E.....	Illinois.....

North, Eugene J.....	Wisconsin.....
Noonan, Thomas E.....	Illinois.....
Neeson, John J.....	Pennsylvania.....
Nelligan, Arthur J.....	Wisconsin.....
Newton, Harry.....	Michigan.....
O'Connor, William J.....	Kentucky.....
O'Brien, Francis B.....	Indiana.....
O'Malley, Dominic K.....	Wisconsin.....
O'Hara, Francis.....	Minnesota.....
O'Hara, John P.....	Minnesota.....
O'Grady, Patrick W.....	New York.....
O'Meara, Thomas F.....	Wisconsin.....
O'Neill, Philip B.....	Indiana.....
O'Brien, J. Michael.....	Minnesota.....
Oliver, James Jr.....	Indiana.....
O'Mahoney, Patrick J.....	Minnesota.....
O'Shea, Daniel E.....	Michigan.....
Olde, Ernest J.....	Michigan.....
O'Reilly, Luke G.....	Missouri.....
O'Reilly, Joseph P.....	Ohio.....
O'Connor, Eugene J.....	Iowa.....
O'Donnell, James.....	Indiana.....
Opfergelt, Edward A.....	Illinois.....
O'Connor, George I.....	Oklahoma Ter.....
O'Connor, Daniel J.....	Illinois.....
O'Shea, John P.....	Indiana.....
O'Phelan, John I.....	Minnesota.....
O'Connor, John J.....	New York.....
O'Donnell, Charles J.....	Indiana.....
O'Brien, William C.....	Ohio.....
O'Donnell, Walter J.....	Michigan.....
Oswald, Matthias J.....	Indiana.....
O'Connor, Charles J.....	Texas.....
O'Connor, William J. M.....	Michigan.....
Pick, John B.....	Wisconsin.....
Petriz, Francis J.....	Illinois.....
Portugal, George C.....	Mexico.....
Putnam, John L.....	Kentucky.....
Parker, Marion J.....	Indiana.....



Pancratz, Alex. J. ....	Minnesota .....
Pryor, Francis ...	Colorado .....
Porter, Ross D. ....	Michigan .....
Pollitz, William M. ....	Illinois .....
Price, Robert J. ....	Wyoming .....
Peery, Francis C. ....	Indian Territory..
Powers, J. Fred. ....	Massachusetts...
Pastor, Justo A. ....	Peru, So. America
Parker, Thomas W. ....	Kansas .....
Powers, John F. ....	Illinois .....
Peurrung, Charles J. ....	Ohio .....
Phillip, Frank J. ....	Illinois .....
Philip, George P. ....	Illinois .....
Paxton, Charles H. ....	Michigan .....
Quigley, Edward F. ....	Indiana .....
Quinn, John D. ....	Pennsylvania ....
Quinlan, John M. ....	Illinois .....
Quinlan, James J. ....	Illinois .....
Quinn, William. ....	New Jersey .....
Rayneri, Eugenio P. A. ....	Cuba .....
Rul, Miguel. ....	Mexico .....
Rose, Fred G. ....	Michigan .....
Revilla, Roberto. ....	Mexico .....
Rafter, Gerald J. ....	Illinois .....
Rulman, Alfred H. ....	Ohio .....
Richon, Alfred J. ....	Illinois .....
Rangel, Jesus. ....	Mexico .....
Ruiz, Enrique E. ....	Cuba .....
Reihing, William H. ...	Pennsylvania ....
Rincon, Francisco. ....	Mexico .....
Rosado, Alonzo F. ....	Yucatan, Mexico
Rayneri, Virgilio N. ....	Cuba .....
Ryan, John J. ....	Indiana .....
Rindskopf, Herbert. ....	Indiana .....
Rhodes, John A. ....	Indiana .....
Reichardt, Herman C. ....	Illinois .....
Rush, Charles E. ....	Indiana .....
Riley, R. Stewart. ....	Ohio .....
Rabb, Donald S. ....	Illinois .....

Rejch, Charles A.....	Indiana.....
Rosado, Jose E.....	Yucatan, Mexico
Riley, John B.....	Kentucky.....
Rousseau, Edward L.....	Nebraska.....
Rempe, Harold R.....	Illinois.....
Rempe, George A.....	Illinois.....
Randle, Drummond F.....	Illinois.....
Robinson, Leo C.....	Illinois.....
Robbins Wilson H.....	Illinois.....
Ratchford, Hugh C.....	New York.....
Rudolph, William H.....	Michigan.....
Rudolph, Marshall K.....	Michigan.....
Rempe, Lester.....	Illinois.....
Rigney, John A.....	Indiana.....
Robert, Hubert R.....	Indiana.....
Rebillot, Paul F.....	Ohio.....
Robinson, William F.....	Mississippi.....
Ryan, Edward A.....	Iowa.....
Ryan, John R.....	Illinois.....
Rumely, Edward A.....	Indiana.....
Ryan, William J.....	Michigan.....
Ross, Albert J.....	Minnesota.....
Rockstroh, Louis H.....	Indiana.....
Rothwell, Henry P.....	Wyoming.....
Ricalo, Pablo.....	Cuba.....
Ross, Reuben J. B.....	Michigan.....
Sweeny, Robert J.....	Washington.....
Seidel, Carlos M.....	Cuba.....
Staudt, Clement L.....	Indiana.....
Stich, George F.....	Illinois.....
Streit, Michael A.....	Iowa.....
Snider, Andrew J.....	Illinois.....
Smith, Leonard F.....	Indiana.....
Soler, Geronimo.....	Cuba.....
Staples, Weyman P.....	Texas.....
Shaw, George L.....	Colorado.....
Soler, Pedro.....	Cuba.....
Stephen, Raymond V.....	Illinois.....
Sullivan, Joseph J.....	Illinois.....
Shea, William A.....	Wisconsin.....

Steiner, Arthur E.....	Michigan.. ..
Schaab, Alfred E.....	Ohio .....
Smith, Edward C....	Pennsylvania ...
Sturla, Francis J.....	Tennessee.....
Sauer, George H.....	Colorado.....
Shea, Allan H.....	Wisconsin.....
Sherlock, Charles V.....	New York.....
Sisk, James H.....	Connecticut.....
Schmid, Conrad S.....	Wisconsin .....
Stahlknecht, Edward M.....	Mexico.....
Schoonover, Fred G.....	Illinois.....
Schmidt, Charles J.....	Pennsylvania ...
Schmidt, Fred J.....	Pennsylvania ...
Stanford, Thomas P. G.....	Kansas.....
Staples, E. Douglas.....	Mexico.....
Schmidt, Henry C.....	Illinois.....
Shea, John P.....	Utah .....
Siewertsen, William T.....	Indiana.....
Smogar, Francis A.....	Indiana.....
Salmon, Louis J.....	New York.....
Steele, Franklin A....	Indian Territory..
Simms, Thomas W.....	Kentucky.....
Sweeny, Francis R.....	Washington.....
Stevens, Walter A.....	Indiana.....
Strong, Grover D.....	Colorado.....
Serafin, Fernando.....	Cuba.....
Strassheim, Arthur G.....	Illinois.....
Schwab, Edward H....	Pennsylvania ...
Stanton, Robert E.....	Ohio .....
Sinnott, Edgar J.....	Indiana.....
Swan, Albert L.....	Illinois.....
Schaus, Herbert G.....	Illinois.....
Strauss, Henry C.....	Ohio .....
Sheekey, Charles J.....	Indiana.....
Spengler, Herbert A.....	Illinois.....
Stafford, Franklin H.....	Illinois.....
Schonlau, Claire E.....	Illinois.....
Seymour, Gerald.....	Iowa .....
Smithwick, Thomas J....	Indiana.....
Scheid, George T....	Ohio .....
Sullivan, Jr., John H.....	Indiana.....

Staples, Merril W.....	Mexico.....
Sabin, Franklin E.....	Illinois.....
Spengler, Francis E.....	Illinois.....
Stout, Edwin Corey.....	Indiana.....
Stout, Milman Alex.....	Indiana.....
Sullivan, Michael I.....	Illinois.....
Swantz, Thomas J.....	Montana.....
Sypniewski, Stanislaus A.....	Indiana.....
Sherry, James J.....	New York.....
Szybowicz, Leo P.....	Indiana.....
Sullivan, Paul E.....	Michigan.....
Sutton, Raymond J.....	Iowa.....
Stanton, John.....	Illinois.....
Sztuczko, Boleslaus J.....	Illinois.....
Schwab, Francis C....	Pennsylvania....
Szalewski, Miecislaus F.....	Indiana.....

Toohy, Joseph L. ....	Ohio.....
Taylor, James G.....	New York.....
Thompson, Walter J.....	Michigan.....
Talcott, Harrison W.....	Indiana.....
Talcott, Rodney D..	Indiana.....
Toranzo, Arturo P.....	Peru, So. America
Thorp, Burt W.....	Iowa.....
Tansey, Louis J.....	Indiana.....
Trentman, Stephen A.....	Indiana.....
Taylor, Bryan M.....	Missouri.....
Touhy, Walter G.....	Illinois.....
Toner, Thomas A.....	Minnesota.....
Tierney, William H.....	Wisconsin.....

Uffendell, William G.....	Illinois.....
Urde, Manuel.....	Mexico.....
Usera, Julio J.....	Puerto Rico.....
Uckotter, George H.....	Ohio.....
Usera, Jose Hernandez,.....	Puerto Rico.....
Velarde, Rafael.....	Puerto Rico.....
Vilaro, Juan.....	Puerto Rico.....
Van Dyke, James A.....	Michigan.....
Villanueva, Santiago F.....	Mexico.....
Van Curen, Burrell A....	Michigan.....

Van Sant, Ralph N.....	Illinois.....
Van Sant, Leport R.....	Illinois.....
Vega, Octavio.....	Mexico.....
Van Valkenburgh, Joseph B.....	Alabama.....
Van Dyke, Francis G.....	Canada.....
Villanueva, Jose A.....	Mexico.....
Von Herbulis, Edward O.....	Virginia.....
Von Herbulis, Albert O.....	Virginia.....
Von Herbulis, Otto O.....	Virginia.....
Van Zandt, Everett C.....	Illinois.....
Vega, Alfonso.....	Mexico.....
Von Phul, Carol.....	Missouri.....
Van Rie, Leo P.....	Indiana.....
Vogt, Frank P.....	Indiana.....
Wardee, Earl B.....	Illinois.....
Welker, Vincent B.....	Ohio.....
Wilson, Ralph M.....	Pennsylvania.....
White, Orrin A.....	Illinois.....
Wangler, Louis A.....	Iowa.....
Weiss, Philip J. Jr.....	Pennsylvania.....
Wolf, Harry M.....	Ohio.....
Wolf, Edward C.....	Ohio.....
Winter, Francis M.....	Pennsylvania.....
Walsh, Julius C.....	Minnesota.....
Whaley, Earl E.....	Ohio.....
Wurzer, Edward C.....	Michigan.....
Weber, Allen B.....	Ohio.....
Wenrick, Judson J.....	Indiana.....
Walsh, John G.....	Pennsylvania.....
Wagner, Louis E.....	Illinois.....
Weidman, Fritz M.....	Ohio.....
Williams, Griffith J.....	Illinois.....
Wertin, John J. E.....	Michigan.....
Weber, Walter D.....	Wisconsin.....
Willard, John A.....	Indiana.....
Winter, Aloysius L.....	Pennsylvania.....
Winter, August.....	Pennsylvania.....
Winter, William J.....	Pennsylvania.....
Wilde, George A.....	Indiana.....
Winter, Charles A.....	Pennsylvania.....

Winkler, Edward..	Indiana
Woolard, James A.	Ohio
White, Benjamin H.	Illinois
Wenter, Henry H.	Illinois
Woods, James Allen.	Colorado
Warren, Homer S.	Illinois
Weist, J. Lambert.	Illinois
Worden, John.	New York
Walsh, Francis M.	Illinois
Walsh, Mathew J.	Illinois
Wimberg, William M.	Ohio
Welch, Thomas J.	Illinois
Walsh, Leo N.	Illinois
Winter, Francis W.	Pennsylvania
Warrell, Glen W.	Illinois
Wilken, Emil J.	Illinois
Yeakel, Jerome J.	Kentucky
Yockey, Chauncey W.	Michigan
Young, John.	Illinois
Ypina, Ignacio.	Mexico
Zolper, Harry W.	Illinois
Zeigler, Harry J.	Ohio
Zeigler, George F.	Wisconsin
Zerhusen, Francis X.	Kentucky
Zipperer, Francis S.	Indiana

Fifty-Seventh  
Annual Commencement.



## CONFERRING OF DEGREES.



**Degree of Master of Arts** (Economics and Philosophy)  
was conferred on

Francis O'Hara, Lanesboro, Minnesota.

**The Degree of Bachelor of Arts** was conferred on

John M. Lilly, Chicago, Illinois.

William J. O'Connor, Louisville, Kentucky.

George J. Marr, Denver, Colorado.

Matthias J. Oswald, Treves, Germany.

William H. Tierney, Whitewater, Wisconsin.

John J. O'Connell, Brooklyn, New York.

Mieczislaus T. Szalewski, South Bend, Indiana.

**The Degree of Bachelor of Letters** was conferred on

Anthony J. Brogan, Oil City, Pennsylvania.

Robert L. Fox, Fort Wayne, Indiana.

John P. Hayes, Oswego, New York.

Joseph J. Sullivan, Chicago, Illinois.

**The Degree of Civil Engineer** was conferred on

Edward F. Hay, Mexico City, Mexico.

John I. Mullen, Iona, Minnesota.

**The Degree of Bachelor of Science in Electrical Engineering**  
was conferred on

Joseph R. Carlton, Bordentown, New Jersey.

Albert Kachur, Michigan City, Indiana.

**The Degree of Bachelor of Science in Biology** was  
conferred on

Vincent B. Welker, Gambier, Ohio.

**The Degree of Bachelor of Laws** was conferred on

Harry P. Barry, Granville, Iowa.

George H. Bohner, Chicago, Illinois.

William E. Baldwin, Chicago, Illinois.  
John J. Cooney, Hartland, Illinois.  
John P. Curry, Hartford, Connecticut.  
Albert C. Fortin, Chicago, Illinois.  
Edward P. Gallagher, Coal Dale, Pennsylvania.  
Laurence Siegfried Highstone, St. Ignace, Michigan.  
Jose Hernandez Usera, San Juan, Puerto Rico.  
George J. Hanhauser, St. Marys, Pennsylvania.  
George A. McGee, Amboy, Illinois.  
Thomas F. O'Meara, West Bend, Wisconsin.  
Philip B. O'Neill, Anderson, Indiana.  
Chauncey W. Yockey, Escanaba, Michigan.  
William A. McInerny, South Bend, Indiana.  
J. Clyde Locke, South Bend, Indiana.  
William P. Glasheen, Delavan, Illinois.  
George W. Kuppler, Pearson, Washington.

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## COMMERCIAL DIPLOMAS.



Commercial Diplomas were awarded to

B. Prosper, Notre Dame, Indiana.  
August J. Brown, Wapakoneta, Ohio.  
Thomas E. Noonan, Chicago, Illinois.  
Michael D. Eagan, Garrett, Indiana.  
Adolph W. Jung, Milwaukee, Wisconsin.  
E. Walter Bauman, Dayton, Ohio.  
B. Bernard, Notre Dame, Indiana.  
Alfred E. Schaab, Paulding, Ohio.  
Edward M. Stahlknecht, Durango, Mexico.  
Daniel L. Murphy, Odell, Illinois.  
John J. Harrington, Richmond, Indiana.  
B. Raymond, Notre Dame, Indiana.  
Joseph T. Lantry, Chatsworth, Illinois.

Robert E. Stanton, Berlin Cross Roads, Ohio.

Charles E. Roesch, Indianapolis, Indiana.

**Certificates in Short Course in Electrical Engineering** were awarded to

Edward C. Smith, McSherrytown, Pennsylvania.

Webster D. Lynch, West Bend, Wisconsin.

**Certificates in Telegraphy** were awarded to

Manuel M. Gomez, Guadalajara, Mexico.

John P. Shea, Eureka, Utah.

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## PRIZE MEDALS.



**The Quan Gold Medal**, presented by Mr. Henry Quan, of Chicago, for the student having the best record in the Classical Course, senior year, was awarded to

George J. Marr, Denver, Colorado.

**The Mason Medal**, presented by Mr. George Mason, of Chicago, for the student of Carroll Hall having the best record for the Scholastic year, was awarded to

John D. Quinn, Scranton, Pennsylvania.

**The Meehan Gold Medal** for English Essays, presented by Mrs. James Meehan, Covington, Kentucky, was awarded to

Anthony J. Brogan, Oil City, Pennsylvania.

**The Breen Gold Medal** for Oratory, donated by the Hon. Wm. P. Breen, '77, of Fort Wayne, was awarded to

Joseph W. Kenney, Richmond, Indiana.

**The Chicago Alumni Association Gold Medal** for Christian Doctrine in Sorin Hall, was awarded to

Albert L. Krug, Dayton, Ohio.

**The Gold Medal for Christian Doctrine** in Corby Hall was awarded to

Henry S. Fink, Baltimore, Maryland.

**The Gold Medal for Christian Doctrine** in Corby Hall was awarded to

John J. Neeson, Philadelphia, Pennsylvania.

**The Fitzsimmons Gold Medal for Christian Doctrine** in Brownson Hall, First Course, presented by the Very Rev. M. J. Fitzsimmons, Vicar-General of the Archdiocese of Chicago, was awarded to

Walter M. Daly, Madison, South Dakota.

**The Gold Medal for Christian Doctrine** in Brownson Hall, Second Course, was awarded to

Leo J. Dwan, Chicago, Illinois.

**The Gold Medal for Christian Doctrine** in Brownson Hall, Third Course, was awarded to

John P. Shea, Eureka, Utah.

**The Mooney Gold Medal for Christian Doctrine** in Carroll Hall, First Course, presented by the Rev. Nathan J. Mooney, '77, Rector of St. Columbkille's Church, Chicago, was awarded to

Gallitzen Farabaugh, Munster, Pennsylvania.

**The Gold Medal for Christian Doctrine** in Carroll Hall, Second Course, was awarded to

Richard S. Kolck, Dubuque, Iowa.

**Seventy-Five Dollars in Gold**, presented by the Hon. Clem Studebaker, South Bend, Indiana, for debating work, was awarded as follows:

**Forty Dollars** to Harry P. Barry, Granville, Iowa.

**Twenty Dollars** to Byron V. Kanaley, Weedsport, New York.

**Fifteen Dollars** to George Kuppler, Pearson, Washington.

**The Barry Elocution Medal** in Brownson Hall, donated by the Hon. P. T. Barry, of Chicago, was awarded to Frederick G. Schoonover, Chicago, Illinois.

**The Gold Medal for Elocution** in Preparatory Course, was awarded to Louis E. Wagner, Chicago, Illinois.

#### ST. EDWARD'S HALL.

**The Sorin Elocution Gold Medal** was awarded to Kenyon W. Mix.

**The Elocution Gold Medal** was awarded to Alvah C. Bosworth.

**The Gold Medal for Christian Doctrine** was awarded to John L. McBride.

**Gold Medal for Letter-Writing** was awarded to Simon R. Dee.

**Gold Medal for Improvement in Piano** was awarded to Henry Donahue.

**The Gold Medal for Mandolin** was awarded to Henry O. Downer.

**The Gold Medal for Piano** was awarded to José P. Gallart.

**The Gold Medal for Violin** was awarded to Raul H. Madero.

**Silver Medal for Improvement in Composition** was awarded to Wilson J. Robbins.

**Silver Medal for Penmanship** was awarded to John J. Garrigan.

**Silver Medal for Letter-Writing** was awarded to Arthur Johnson.

**Silver Medal for Improvement in Letter-Writing** was  
awarded to  
Benjamin J. Houser.

**Silver Medal for Improvement in Penmanship** was awarded  
to  
Harold A. Munson.

**Silver Medal for Improvement in Penmanship** was awarded  
to  
Delos C. Fergus.

## FIRST HONOR AWARDS.



[First Honors are awarded to students of Sorin, Brownson and Corby Halls, who have attained an average of at least 90 per cent, for scholarship and deportment during the scholastic year. The first honor awarded for the first year takes the form a diploma; that awarded for two years of satisfactory work is a gold medal. This medal may be renewed from year to year.]

### SORIN HALL.

**First Honor Gold Medals** were awarded to

Robert A. Krost, Crown Point, Indiana.

Albert L. Krug, Dayton, Ohio.

Orrin A. White, Hanover Illinois.

Francis J. Petritz, Rockford, Illinois.

George J. Hanhauser, St. Marys, Pennsylvania.

### CORBY HALL.

(No First Honor Medal awarded this year.)

### BROWNSON HALL.

**First Honor Gold Medal** was awarded to

Louis M. Antoine, Somanauk, Illinois.

### SORIN HALL.

**First Honor Diplomas** were awarded to

Harry P. Barry, Granville, Iowa.

Leo Cleary, Grand Island, Nebraska.

John P. O'Hara, Lanesboro, Minnesota.

Thomas F. O'Meara, West Bend, Wisconsin.

Arthur E. Steiner, Monroe, Michigan.

### CORBY HALL.

**First Honor Diplomas** were awarded to

Max H. Fleischer, Chicago, Illinois.

Edward C. Wolf, Germantown, Ohio.



BROWNSON HALL.

**First Honor Diplomas** were awarded to

Walter M. Daly, Madison, South Dakota.

James J. Geraghty, St. Paul, Minnesota.

John J. Harrington, Richmond, Indiana.

Gerald J. Rafter, East St. Louis, Illinois.

Frederick G. Schoonover, Chicago, Illinois.

William T. Siewertsen, South Bend, Indiana.

## DEPARTMENT PRIZE MEDALS.



[Gold Medals for Department are awarded to pupils of Carroll and St. Edward's Halls, who have spent two full years at Notre Dame, and whose deportment during the whole time has been unexceptionable.]

### CARROLL HALL.

**Gold Medals for Department** were awarded to

Walter A. Stevens, E. Walter Bauman, Gallitzen Farabaugh, Hubert A. Geraghty, Clarence J. Kennedy, Joseph T. Lantry, Benedict F. Medley, Benjamin Madero, Julio E. Madero, Gabriel J. Madero, Walter G. Tuohy, George H. Uckotter, Bryan M. Taylor (renewal), Laurence H. Lucken (renewal 2d time), Alexander W. McFarland (renewal), John M. Quinlan (renewal 2d time), John A. Willard (renewal).

### ST. EDWARD'S HALL.

Alvah C. Bosworth, J. Don Brooks, Raul H. Madero, Grover F. Casey, Edward O. Von Herbulis, Albert O. Von Herbulis, Edward L. Rousseau, Wells E. Goodhue, Bernard J. Mulligan, William H. Kasper, Jose P. Gallart, John L. McBride, Simon R. Dee, John J. Garrigan, Drummond F. Randle, Huntington St. Clair (renewal), Clarence J. McFarland (renewal).

[Silver Medals for Department are awarded to pupils of Carroll and St. Edward's Halls, who have spent two full years at Notre Dame, and whose deportment has given general satisfaction.

### CARROLL HALL.

**Silver Medals for Department** were awarded to

William R. McNeil, Francis G. Van Dyke.

### ST. EDWARD'S HALL.

Claire E. Schonlau, Francis F. McIver, Charles E. Miles, Charles J. Kelley.

## NEEDS OF THE UNIVERSITY.



Visitors to Notre Dame judge from the appearance of the buildings and grounds that the University has no need of money. It is, nevertheless, absolutely without endowment, and its work is seriously hampered because it has no resources except the fees of the students. There is *one* scholarship, and the interest from this foundation is used in educating and boarding a student.

There were last year 1,452 Catholic students in 6 per centum of the non-Catholic colleges of America, and very many of these will lose their faith, and all will be weakened in that faith, because our people look upon Collegiate Institutions as the property of private corporations which are to be left to take care of themselves.

Notre Dame asks for scholarships for boys that can not pay the expense of education, and who therefore are obliged to go to non-Catholic Colleges to the detriment of their faith. A foundation of \$5,000 will educate and board a student as long as the University exists. As one bursar is graduated another can take his place. The founder of the scholarship, of course, always has the privilege of appointing the student.

We lack money for a library building, and for two more dwelling-halls like Sorin Hall.

Two or three thousand dollars are required for finishing and equipping the new gymnasium.

Foundations for scholarships are also a pressing need.

There is no Library fund for the purchase of new books.

The names of benefactors will be given to all foundations.

Bequests should be made after this form:

UNIVERSITY OF NOTRE DAME.

---

*I give, devise and bequeath to the University of  
Notre Dame du Lac, an institution incorporated  
under the laws of the State of Indiana, and located  
at Notre Dame, Indiana, \_\_\_\_\_*

## The Notre Dame Scholastic,

Is the title of a neat 28-page paper, devoted to the interests of the students, and published by them at the University every week during Term time. This journal opens a field for young writers who might otherwise, for want of a proper medium, allow their talents to remain inactive. It also affords students an opportunity for practical experience in journalism. During seasons of special interest at the University, THE SCHOLASTIC is published daily.

THE SCHOLASTIC contains articles of an instructive literary character, interesting Biographical Sketches, Essays, Poetry, Notes on Art, Music, Science and Literature, Notes of New Publications, etc., etc.

In addition to its literary features, THE SCHOLASTIC has a special importance for students, their parents, and all who have had classes at the University in times past, an account of the weekly summary of events happening at Notre Dame, personal Notices of former students, Rolls of Honor, Class Honors, List of Excellence, etc., which appear in its columns every week. Reports relative to the arrangement of classes, the promotion of the more talented and energetic students, etc., also find a place in this paper and keep the parents and others informed about matters that concern their children and friends.

It will be the endeavor of the Editors during the coming year to merit the encouragement given the paper in the past, and the encomiums bestowed upon it by the press in general.

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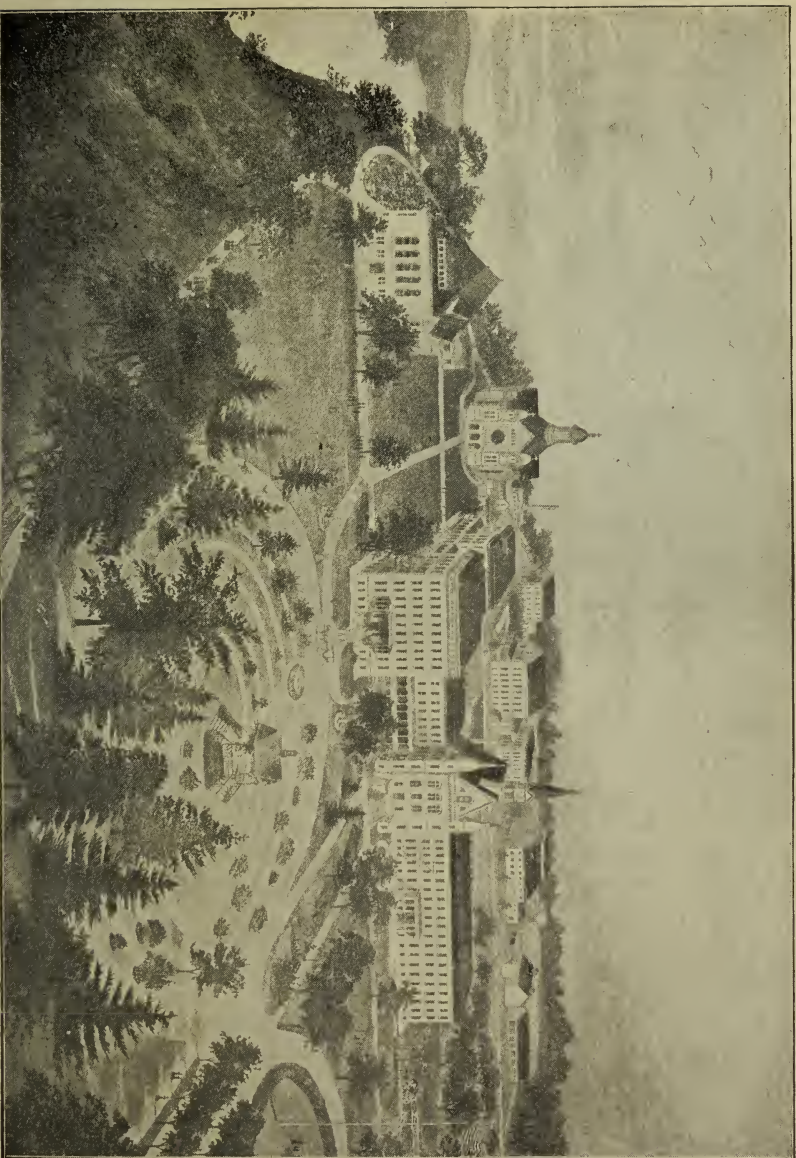
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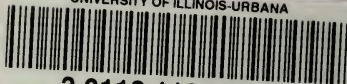








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